September 2014

# Arkansas

# Project Status


US Army Corps of Engineers®
Vicksburg District

Value to the Nation

# Arkansas Project Status Book

for September 2014

*This Project Status Book contains information on the latest progress of the Vicksburg District's projects in the State of Arkansas. You will find project maps with corresponding fact sheets for each project. Fact sheets cite authorization for the project and provide locations and project description information. Also provided are activities for the fiscal year 2014. District capabilities are included for additional funds that may become available. Additionally, important issues or impacts are supplied for a more detailed perspective of the project. The Vicksburg District publishes this book to provide valuable status information for ongoing projects. For your added convenience, a copy of this book in PDF format is provided on the disk attached below. However, if you should find you still have questions or need additional information about projects contained in this book, please contact:*

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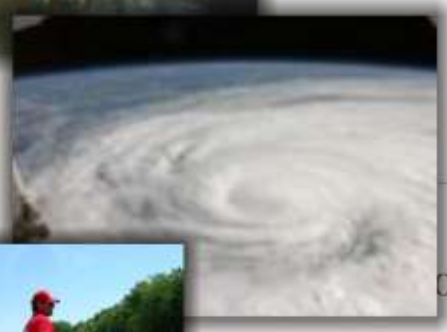
# General Information

# General Information

# Index

# The Mississippi Valley Division

- We are 6 Interdependent Districts
- We have regional technical experts that bring expertise from the entire valley to work any water resource engineering challenge
- It is our pleasure to serve and provide the Nation's water resource engineering solutions
- We are...*BUILDING STRONG*



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Vicksburg District

# BIOGRAPHY

## Colonel John W. Cross

Colonel John W. Cross is a native of Laurel, Mississippi and earned his Bachelor of Science Degree in geology in 1987 from the University of Southern Mississippi. He received a Masters of Business Administration in 1998 from the University of Central Texas and a Masters of Strategic Studies in 2010 from the US Army War College. His military education includes the Engineer Officer Basic and Advanced Courses, the Command and General Staff College at Fort Leavenworth, Kansas, and the US Army War College at Carlisle Barracks, Pennsylvania.

Colonel Cross began his career as an engineer platoon leader in Germany and later served as a company executive officer. After attending the Engineer Captain's Advanced Course, he moved to Fort Polk, Louisiana and deployed to Desert Storm serving as an assistant battalion operations officer. Following the war, he commanded an engineer company at Fort Polk, Louisiana and Fort Hood, Texas. He was selected for the Army's Training with Industry Program where he worked for the Environmental Protection Agency (EPA) in Denver, Colorado. His focus during this time included compliance with State and Federal regulations and environmental restoration at Superfund sites and Formerly Used Defense Sites (FUDS) in an eight state area. After working with the EPA in Denver, Colonel Cross was assigned to the Corps of Engineers Fort Worth District with duty at Fort Hood, Texas. At Fort Hood, he worked on various environmental contracts as well as military construction and FUD remediation in central Texas. As part of his tour with the District, he served as a project officer at Brooks Air Force Base in San Antonio, Texas supervising Military Construction for the Air Force.

He attended the Army's Command and General Staff College and served again at Fort Hood as a battalion operations officer and executive officer. After a tour in Stuttgart, Germany, he was selected for command of the Brigade Special Troops Battalion in 1st Brigade, 4th Infantry Division at Fort Hood. He deployed the battalion to Iraq in 2006 and operated north of Baghdad. After command, he was selected to lead the engineer training team at the Army's National Training Center at Fort Irwin, California where he trained battalions before they deployed to combat in Iraq and Afghanistan.

After graduating from the War College in 2010, he was assigned to Fort Bragg, North Carolina where he served as the XVIII Airborne Corps Engineer and deployed with the Corps to Iraq. In Iraq, he served as the Deputy Engineer to United States Forces Iraq and was responsible for the final disposition of over 80 bases and attendant infrastructure housing 50 thousand soldiers as well as the construction of facilities for the Department of State.

Colonel Cross is married and they have two sons.

# Vicksburg District Congressional Districts


## Governors and U.S. Senators

| ARKANSAS | LOUISIANA | MISSISSIPPI |
|---|---|---|
| Governor Mike Beebe | Governor Bobby Jindal | Governor Phil Bryant |
| Senator Mark Pryor | Senator David Vitter | Senator Thad Cochran |
| Senator John Boozman | Senator Mary Landrieu | Senator Roger Wicker |

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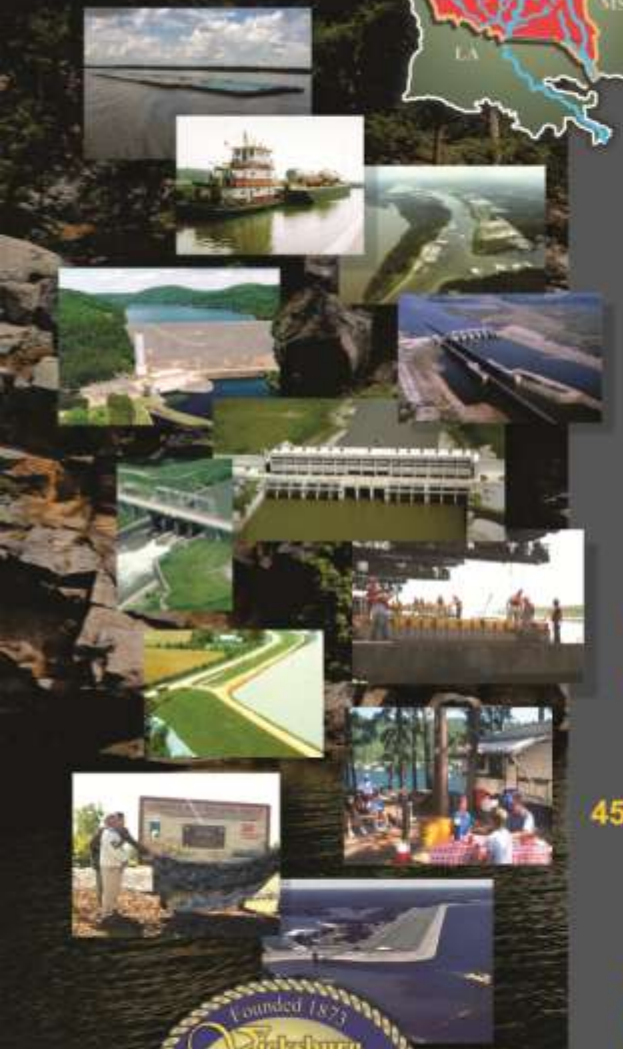

## Vicksburg District Assets

- **9** Watersheds in Arkansas, Louisiana, and Mississippi
- **7** Mississippi River Ports handling over 8.5 million tons of cargo
- **5** Red River Ports handling over 1 million tons of cargo
- **12** Locks and **9** dams on the Pearl, Red and Ouachita Rivers
- **3** Hydropower plants capable of generating 168,500 kilowatts of electricity
- **10** Lakes with 1,673 miles of shoreline
- **21** Pumping plants
- **478** Flood control structures
- **1,252** Miles of navigable channel
- **1,910** Miles of levees
- **460** Miles of Mississippi River Levees
- **450,603** Acres of project and mitigation lands are managed for forestry and wildlife enhancement
- **146** Recreation areas
- **2,772** Campsites
- **1,529** Picnic sites

# Economic Benefits

***From a program of $150M, the Vicksburg District returns these economic benefits!***

## Annual Direct Economic Contributions

| | |
|---|---|
| Fees Collected | $ 1,992,000 |
| Agricultural | $ 576,000 |
| General Leases and Concessions | $ 413,000 |
| Water Supply Payments | $ 1,092,000 |
| Hydropower | $ 12,000,000 |
| **Total Direct Contributions** | **$ 16,073,000** |

## Indirect Economic Contributions

| | |
|---|---|
| Flood Damages Prevented | $ 654,988,000 |
| Recreation | $ 49,763,000 |
| Water Supply Benefits | $ 115,792,000 |
| Navigation Savings | $ 125,020,000 |
| **Total Indirect Contributions** | **$ 945,563,000** |

Value to the Nation

# Mississippi River

## Benefits

| Project | Average Annual Costs | Average Annual Benefits |
|---|---|---|
| Mississippi River and Tributaries | $210 Million | $1.46 Billion |

### Benefit-to-Cost Ratios

*The current remaining (FY13) benefit-to-cost ratio for the MR&T system is 45.3 to 1 and likewise the total benefit-to-cost ratio for the system is 3.3 to 1 at the 7% interest rate. The benefit-to-cost ratios are based on annualizing the remaining and total benefits associated with the completed project and dividing them by the respective annualized cost to achieve these benefits. All project benefits and cost are annualized at the 7% interest rate over the economic life of the project. For the MR&T the economic life is 100 years.*

### Levees



Consists of raising, strengthening and extending levees to provide protection against flooding.



### Channel Improvement





Consists of stabilizing riverbanks in desirable alignment and obtaining the most efficient flow characteristics for flood control and navigation by revetments, dikes, foreshore protection and improvements. This improves navigation conditions, stabilizes bends, and reduces maintenance dredging requirements


### Did you know?

*The Mississippi River from its confluence with the Ohio River to Baton Rouge, LA supports the transport of over 176 million tons of cargo annually!*



## Flood Risk Management

Flood risk management along the Mississippi River is provided through a coordinated system-wide water management program utilizing:

- Water storage reservoirs
- Levees
- Drainage Structures
- Channel Improvements
- Pumping Plants
- Weirs
- Sediment Reduction and Erosion Reduction Measures

## Environmental Stewardship

The Corps has developed an environmentally sustainable project with the philosophy to avoid and minimize adverse environmental impacts. When impacts are unavoidable, compensation is made for the loss.

- The Corps has created over **6,700 acres of aquatic habitat** from borrow areas
- The Corps has **reforested at least 3,000 acres** of borrow areas
- The Corps has **reforested over 25,000 acres** of mitigation lands

## Navigation

The Vicksburg District uses numerous tools to increase the safety and dependability of navigation on the Mississippi River.

- Dikes, revetments, and dredging are used to stabilize the navigation channel
- Channel Stabilization improves flow and reduces erosion
- The Vicksburg District supports two MR&T ports and five O&M ports

### MR&T Ports

| MR&T Port | 2012 Commercial Tonnage | Jobs Sustained | Annual Payroll |
|---|---|---|---|
| Greenville, MS | 3,071,177 | 540 | $12,600,000 |
| Vicksburg, MS | 2,601,580 | 4,000 | $80,000,000 |

### O&M Ports

| O&M Port | 2012 Commercial Tonnage | Jobs Sustained |
|---|---|---|
| Rosedale, MS | 1,184,310 | 325 |
| Yellow Bend, AR | 402,482 | N/A |
| Lake Providence, LA | 732,807 | 291 |
| Madison Parish, LA | 433,258 | 300 |
| Claiborne Co., MS | N/A | N/A |

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MISSISSIPPI RIVER

# Ports

## Port of Rosedale (RM 585)

32 RM

**2012 commercial tons** - 1,184,310
**3-year average tonnage** - 1,234,282
**Industries:** esco Resource, Cives Steel, Jimmy Sanders Agricultural, Jantran Towing, APAC

## Yellow Bend Port (RM 554)

17 RM

**2012 commercial tons** - 402,482
**3-year average tonnage** - 618,000
**Industry:** Bruce Oakley, Ark City Tank Storage, T.L. James, Producers Rice Mill

## Port of Greenville (RM 537)

53 RM

**2012 commercial tons** - 3,071,177
**3-year average tonnage** - 2,452,950
**Jobs sustained** - 540
**Major Industries:** Entergy, ConAgra Fertilizer, APAC, Bunge, US Gypsum, Greenville Gravel, Scott Fertilizer, Superior Boat Works, Farmer Grain Terminal, Ergon, Greenville Shipbuilders, USCG - Patoka

## Lake Providence Port (RM 484)

26.8 RM

**2012 commercial tons** - 732,807
**3-year average tonnage** - 959,751
**Jobs Sustained** - 291
**Industries:** Terral River Service, Bunge

## Madison Parish Port (RM 457.2)

20.2 RM

**2012 commercial tons** - 433,258
**3-year average tonnage** - 540,909
**Jobs Sustained** - 300-400

## Port of Vicksburg (RM 437)

**2012 commercial tons** - 2,601,580
**3-year average tonnage** - 3,105,163
**Jobs sustained** - 4,000
**Designated Foreign Trade Zone, Port of Entry** - maintains a U.S. Customs Service
**Major Industries:** Anderson-Tully Lumber , Big River Shipbuilders, Bunge-Ergon, Citgo, ConAgra Fertilizer, Petroleum, DTE Petcoke, Ergon Marine & Industrial Supply, Ergon Refining, Falco Lime, Falco Chemical, Gavilon Fertilizer, Graham Packaging, Kinder Morgan Bulk Terminals, Magnolia Marine Transport, Neill Gas, Shell Oil, Quaker State, Polyvulc USA, Power Transport Service, Smith Towing A, Specialty Process Fabricator, US Coast Guard, Vicksmetal Armco, Waring Oil

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## Value to the Nation

# Red River Watershed
# J. Bennett Johnston Waterway


## Cargo

| Port | Types of Cargo |
|---|---|
| Caddo-Bossier | Aggregate, Coal, Steel, Fertilizer, Petrochemicals, Project Lifts |
| Red River Parish | Aggregate, Coal, Steel, Fertilizer, Petrochemicals, Project Lifts |
| Natchitoches | Aggregate, Forest Product Asphalt |
| Alexandria Regional | Fertilizer, Military Cargo, Citric Acid, Aggregate, Petrochemicals |
| Avoyelles Parish | N/A-Emerging Port |

## Commodity Movements

| Commodity | CY 2010 Short Tons | CY 2011 Short Tons |
|---|---|---|
| Crude Petroleum | 264,710 | 192,993 |
| Gasoline | 334,057 | 310,950 |
| Distillate Fuel Oil | 397,486 | 590,641 |
| Residual Fuel Oil | 266,798 | 412,439 |
| Nitrogenous Fertilizer | 132,277 | 110,911 |
| Alcohols | 226,917 | 205,911 |
| Ammonia | 65,935 | 84,642 |
| Sodium Hydroxide | 135,114 | 143,717 |
| Limestone | 1,698,290 | 1,455,483 |
| Sand & Gravel | 726,082 | 900,903 |
| Waterway Materials | 1,466,628 | 1,023,803 |
| Lime | 11,251 | 39,936 |
| Grains | 217,884 | 384,924 |
| Oilseeds | 185,710 | 185,710 |

## Did you know?

- The $1.9 billion Red River Waterway Project was completed in 1994
- **Five lock and dam complexes** provide a total lift of 140 feet the equivalent of a 14-story building
- The navigation channel has a minimum depth of 9 feet and a minimum width of 200 feet
- The U.S. Army Corps of Engineers operates and maintains the locks and dams and supervises bank stabilization and other enhancements
- Over **1.7 million visitors annually** take advantage of facilities offered by 22 recreation areas in 8 parishes along the waterway
- **Over 8,400 acres of mitigation lands** have been purchased to offset losses caused by project construction

## Ports

| Port | 2010 Commercial Tonnage | Jobs Sustained |
|---|---|---|
| Caddo-Bossier | 1,700,000 | 7,550 |
| Red River Parish | 959,366 | N/A |
| Natchitoches | 195,113 | 291 |
| Alexandria Regional | 1,500,000 | 300 |
| Avoyelles Parish | N/A | N/A |

## Project Benefits

| Benefits | Basic Project | With Gaming |
|---|---|---|
| Total injection (spending) | $ 4,629,600,000 | $ 16,410,800,000 |
| Total Sales | 8,471,300,000 | 25,804,700,000 |
| Total Earnings | 2,770,200,000 | 8,110,000,000 |
| Total Taxes | 58,200,000 | 170,300,000 |
| Total Jobs (average) | 2,107 | 6,862 |

## Volunteer Partners

| Organization | Service Provided |
|---|---|
| City of Shreveport | Operation and Maintenance of the Shreveport Regional Visitor Center |
| Red River Parish Police Jury | Mow and clean areas of Lock 4 East and West Recreation Areas |
| City of Natchitoches | Operation and Maintenance of the Grand Ecore Visitor Center |

Vicksburg District, Mississippi Valley Division, Founded 1873

## Value to the Nation

# Ouachita -Black Watershed


## Commodity Movements

| Commodity | CY 2010 Short Tons | CY 2011 Short Tons |
|---|---|---|
| Crude Petroleum | 254,085 | 102,323 |
| Gasoline | 201,497 | 174,499 |
| Distillate Fuel Oil | 101,113 | 163,687 |
| Nitrogenous Fertilizer | 30,341 | 4,416 |
| Ammonia | 65,935 | 84,642 |
| Sodium Hydroxide | 106,250 | 82,146 |
| Metallic Salts | 36,997 | 11,390 |
| Limestone | 181,768 | 134,664 |
| Grains | 59,812 | 82,207 |
| Oilseeds | 78,161 | 95,521 |

## Ouachita - Black Benefits

| Benefit | Value |
|---|---|
| Transportation Savings | $1,100,000,000 |
| Jobs Sustained | 28,000 |
| Annual Payroll | $325,000,000 |
| Impact on Economy | $3,900,000,000 |
| Taxes Paid | $180,000,000 |

## Ports

| Ports | Typical Cargo |
|---|---|
| Greater Ouachita | *Aggregates, oil, fuel, fabricated steel* |
| Columbia | *Cotton seed and grain* |

## Recreation

**18 Corps recreational** areas along the 4 pools of the Ouachita-Black Navigation Project with 700,000 visitors annually - facilities include:

- 18 boat ramps with 48 lanes
- 16 day-use areas
- 1 swimming beach
- Two Class A campgrounds outgranted to local governments

## Environmental Stewardship

- Originally part of the project, the **65,000 acre** Felsenthal National Wildlife Refuge lies adjacent to the Ouachita River in Arkansas
- The **15,500 acre** D'Arbonne National Wildlife Refuge is located on Bayou D'Arbonne in Louisiana

## Flood Risk Management

Watershed management is provided through a coordinated system-wide water management program utilizing:

- Water storage reservoirs with over 3.5 million acre-feet of capacity
- **Over 370 miles of levees** along the Ouachita River, and in the Tensas-Cocodrie, Larto Lake to Jonesville, Sicily Island and Below Red River areas
- **120 miles of channel** and tributary improvements along the Tensas River
- **5 pumping plants** of 300 cfs, 500 cfs, 750 cfs, 4,000 cfs, and 6,500 cfs

## Navigation

- **337-mile Ouachita-Black Navigation Project** provides for a 9-foot by 100-foot navigation channel from the mouth of the Black River to Camden, AR
- **4 Locks and Dams** to regulate pool height and pass navigation
- Project supports approximately **28,000 private sector jobs** with an annual **payroll of $325,000,000**

## Water Supply

- Provides water supply for cities of Hot Springs, Malvern, Arkadelphia and Camden in Arkansas as well as Monroe, Louisiana
- Supplies water to nine major industries
- Provides water supply for crop irrigation

H. K. Thatcher L&D
River Mile 281.9

Felsenthal L&D
River Mile 226.9

Columbia L&D
River Mile 117.0

Jonesville L&D
River Mile 25.0

Upper Ouachita NWR

Bayou D'Arbonne NWR

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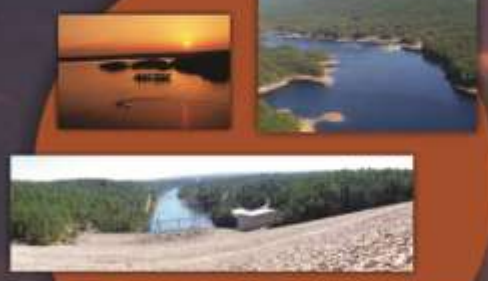
Value to the Nation

# Arkansas Lakes








## A Corps First!

*DeGray Lake holds the distinction as the first "pump back capable" impoundment in the history of the Corps of Engineers. A re-regulation dam forms a 400-acre impoundment directly below the main lake that serves as a storage basin for pump back capable features. During designated times, i.e. drought, the 28,000 KW generator can be reversed pulling water out of the Lower Lake into the main lake to be utilized again for hydropower generation. The 400-acre Lower Lake also serves as an ideal waterfowl refuge.*

## Hydropower

| Project | Generating Capacity |
|---|---|
| **Blakely Mountain Dam - Lake Ouachita** | 75,000 megawatts |
| **DeGray Lake** | 68,000 megawatts |
| **Narrow Dam - Lake Greeson** | 25,500 megawatts |

## Economic Impacts

| Project | Economic Impact |
|---|---|
| **Lake Ouachita** | $18,000,000 |
| **DeGray Lake** | $14,000,000 |
| **Lake Greeson** | $6,000,000 |

## Did you know?

- **Narrows Dam is the only "all concrete" dam in the Vicksburg District**
- **The 3 Arkansas Lakes support over 700 jobs and provide over $38,000,000 in economic benefits to local economies**

1,127,000 visits in 2012!

### Blakely Mountain Dam - Lake Ouachita 1956

Located along the Ouachita River in central Arkansas and surrounded by the Ouachita National Forest, the dam is 1100 feet wide and 205 feet tall creating a lake 205 feet deep at the deepest level. The project includes 690 miles of shoreline, 40,000 acres of water and 20,000 acres of public land. Facilities include 18 recreation areas with 18 campgrounds, 7 day-use areas, 19 boat ramps and 10 swimming beaches.

954,000 visits in 2012!

### DeGray Lake 1972

Located along the Caddo River in south central Arkansas, the mulit-purpose project includes 32,400 acres. DeGray Dam has a crest 3,400 feet wide and rises 243 feet above the river bed. The dam creates a lake 200 feet deep at its deepest level with 207 miles of shoreline. Facilities include 15 recreation areas with 8 campgrounds, 7 day use areas, 11 boat ramps and 8 swimming beaches.

366,000 visits in 2012!

### Narrows Dam Lake Greeson 1950

Located along the Little Missouri River in southwest Arkansas, Narrows Dam is 941 feet wide and rises to a height of the mean valley. The lake created by the dam, Lake Greeson, stretches 2 miles in length and is 150 deep at its deepest level and has 134 miles of shoreline. The project contains over 16,000 acres with over 15,000 acres forested. Facilities include 17 recreation areas with 12 campgrounds, 7 day-use areas, 9 boat ramps and 6 swimming beaches.

## Value to the Nation

# Yazoo River Watershed


## Yazoo River Watershed

encompasses the delta area extending north from Vicksburg, MS to north of Clarksdale, MS and east from the Mississippi River to the hills east of Greenwood, MS. It consists of roughly 8,900 square miles including all or parts of 12 Mississippi counties. The watershed has an approximate length of 175 miles and an approximate width of 40 miles.

## Benefits

| Project | Average Annual Costs | Average Annual Benefits |
|---|---|---|
| Upper Yazoo Projects | $17,373,000 | $52,816,000 |
| Delta Headwaters Project | $24,917,000 | $24,917,000 |

## Main Stem



Consists of new and enlarged levee improvements along the Yazoo, Tallahatchie, and Coldwater Rivers from Yazoo City to Prichard, MS; and channel clearing, cutoffs, and channel enlargement along the Yazoo, Tallahatchie and Coldwater Rivers.

## Upper Yazoo Projects


Includes channel and levee features along the main channel of the Yazoo, Tallahatchie, and Coldwater Rivers from the vicinity of Yazoo City, MS to the vicinity of the confluence of Arkabutla Creek with the Coldwater River.stabilization, and sediment / erosion control.

## Delta Headwaters Project




Consists of 16 watersheds, ranging from 1 to 600 square miles, with features including bank stabilization; grade control structures; floodwater-retarding structures and channel modifications for flood risk management; bank stabilization, and sediment/erosion control.


## Flood Risk Management

Flood risk management in the Yazoo River Basin is provided through a coordinated system-wide water management program utilizing:

- 4 water storage reservoirs
- 202 miles of levees
- 103 drainage structures
- 583 miles of channel
- 1 Pumping plant
- 8 Weirs
- Sediment reduction projects
- Erosion reduction measures

### Flood Damages Prevented

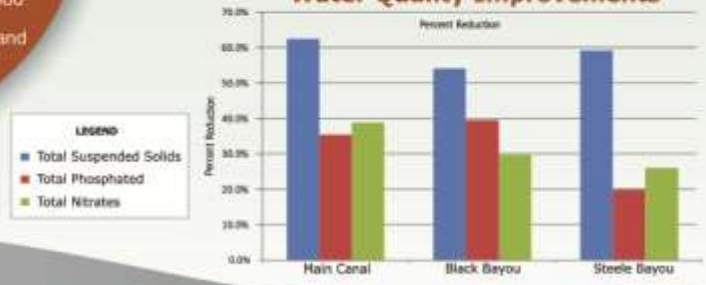
| Area | FY 13 Flood Damage Prevented | Cumulative Flood Damage Prevented |
|---|---|---|
| Yazoo Backwater | $ 1,217,000 | $ 99,311,000 |
| Yazoo Headwaters | $13,093,000 | $1,902,369,000 |
| Mississippi Lakes | $ 9,034,000 | $1,320,725,000 |
| Big Sunflower River | $ 4,152,000 | $ 417,369,000 |
| Total Yazoo Basin | $27,496,000 | $3,739,774,000 |

## Environmental Stewardship

Since the early 1990s, the Vicksburg District has been involved with a flood control/sediment reduction project in the watershed which has dramatically improved water quality. Projects have included:

- Installation of low head weirs to maintain minimum water depths in channels
- Installation of 67 sediment control structures to prevent sediment from filling channels
- Water quality monitoring
- Large post-project reduction of in-stream suspended solids (TSS)

### Water Quality Improvements

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## Value to the Nation

# Mississippi Lakes




## Benefits

| Project | Average Annual Costs | Average Annual Benefits |
|---|---|---|
| Arkabutla Lake | $5,000,000 | $33,000,000 |
| Sardis Lake | $5,000,000 | $34,000,000 |
| Enid Lake | $5,000,000 | $22,000,000 |
| Grenada Lake | $5,000,000 | $39,000,000 |

## Economic Impacts

| Project | Economic Impact | Jobs Supported |
|---|---|---|
| Arkabutla Lake | $14,400,000 | 224 |
| Sardis Lake | $26,200,000 | 427 |
| Enid Lake | $10,500,000 | 161 |
| Grenada Lake | $49,930,000 | 742 |

## Visitation

| Project | 2012 Visits |
|---|---|
| Arkabutla Lake | 854,371 |
| Sardis Lake | 1,300,000 |
| Enid Lake | 569,395 |
| Grenada Lake | 1,821,815 |

## Did you know?

- Over 4.5 million visits are made to the lakes' facilities each year.
- Visitor spending at the North Mississippi Lakes represents a sizable component of the economies of local communities surrounding the lakes.
- Visitors spend over $101 million annually with 52% being captured by local economies.
- Visitor spending supports the addition of over 1,500 jobs.

### Arkabutla Lake – 1943

Located just 30 minutes from Memphis, TN and Tunica, MS, in Tate and DeSoto counties in north Mississippi, Arkabutla Lake covers over 11,000 acres and provides a variety of opportunities for all outdoor enthusiasts to enjoy. Facilities include picnic areas, campgrounds, biking, hiking and walking trails, boat trails, equestrian trails ADA fishing pier and playgrounds.

### Sardis Lake – 1940

Sardis Lake stretches over 98,000 acres thru Panola, Lafayette and Marshal Counties in northwest Mississippi. Located approximately 1 hour from Memphis, TN and 30 minutes from the University of Mississippi, the lake is a popular destination for water-related recreation. Facilities include nine campgrounds, boat ramps, cabins, playgrounds and swimming beaches.

### Enid Lake – 1952

Located approximately 1 mile off Interstate 55, 72 miles south of Memphis, TN, Enid Lake encompasses over 44,000 acres and is visited each year by more than 1.5 million visitors. Enid has been recognized as one of America's Top 10 Fishing Spots. Facilities include campgrounds, hiking trails, off-road vehicle trail, playgrounds, boat ramps and swimming beaches.

### Grenada Lake – 1954

Located in the gently rolling hills of pine and hardwood at the entrance to the Mississippi Delta, The lake covers 36,000 acres and offers some of the best fishing opportunities in the southeastern United States, and most any kind of water activity imaginable. Facilities include campgrounds, boat ramps, fishing areas, shelters, playgrounds and swimming beaches.

Vicksburg District — Founded 1873 — of the Mississippi Valley Division

## Value to the Nation

# Pearl River Watershed


Carthage

JACKSON

Levee Plan

Consists of raising, strengthening and extending levees to provide protection against flooding.

Monticello

PEARL RIVER

Columbia

Bogalusa

Picayune

***The Pearl River originates in Neshoba County, MS and meanders approximately 444 miles to empty into Lake Borgne. The Pear River Watershed covers some 8,760 square miles and includes all or parts of 23 Mississippi Counties parts of 3 Louisiana Parishes.***

## Flood Risk Management

The Jackson (Fairgrounds) and East Jackson levees were completed in 1968 by the Corps. These protective works consist of two earthen levees, four gated outlets, and two pumping stations. Some 5.34 miles of river channel work was involved in constructing the plan. The Fairgrounds levee protects 420 acres in the fairgrounds area of Jackson on the west side of the river. The longer East Jackson levee protects 5,870 acres, including the town of Pearl and portions of Flowood and Richland. This project was sponsored by the Rankin-Hinds Pearl River Flood and Drainage Control District, which presently operates and maintains the levees. In 1984, an extension on the north end of the Fairgrounds levee was constructed to eliminate flanking of the levee.

Clearing of the floodway below the levee in Jackson was identified as an early action item to reduce Jackson flooding following the 1979 flood. The clearing plan, which was completed in 1984, extended from about 0.5 mile below the old Jackson sanitary landfill to Woodrow Wilson Bridge, a total of 3.3 river miles. The plan consisted of 237 acres of complete clearing, 20 acres of selective clearing, and 89 acres of partial clearing. To offset unavoidable impacts to fish and wildlife associated with the clearing plan, approximately 320 acres of bottomland hardwood were acquired as mitigation. The Pearl River Basin Development District isthe local sponsor

In 2012, the Rankin-Hinds Pearl River Flood and Drainage Control District initiated a Section 211 Flood Risk Management Study to evaluate additional flood risk management alternatives for the Jackson, MS area. The study is funded 100 percent with non-Federal funds.

## Environmental Stewardship

In all aspects of natural and cultural resources management, the Corps promotes awareness of environmental values and adheres to sound environmental stewardship, protection, compliance and restoration practices. The Corps manages for long-term public access to, and use of, the natural resources in cooperation with other Federal, State, and local agencies as well as the private sector.

In late summer and early fall, virtually all of the Pearl River flow was captured by an area known as Wilson Slough. This left the main channel of the Pearl River in the vicinity of Walkiah bluff completely dry in some locations leaving property owners and local citizens with no opportunity to enjoy the benefits of the river. For more than 20 years, locals tried to get a project to restore flows in the vicinity of Walkiah Bluff. Using an authority established by Congress in 1990 which provided for environmental wetland restoration the Corps began the Pearl River, Walkiah Bluff Flow Distribution Project. The project was designed to restore flows in the Pearl River and once again make it a viable resource for both Mississippi and Louisiana.

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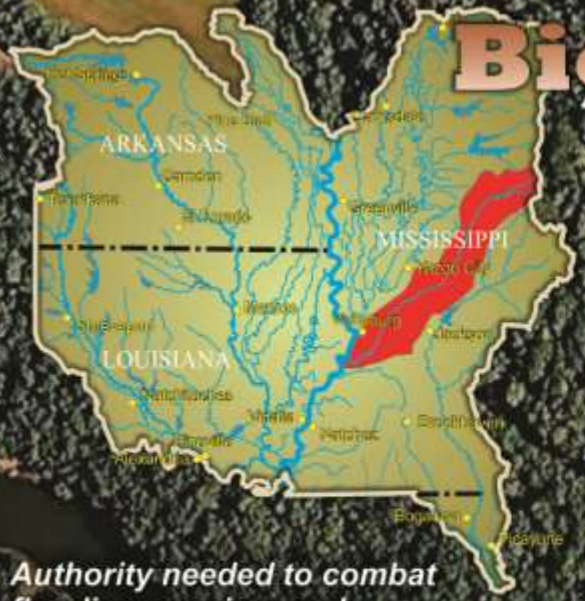
Value to the Nation

# Big Black River Watershed



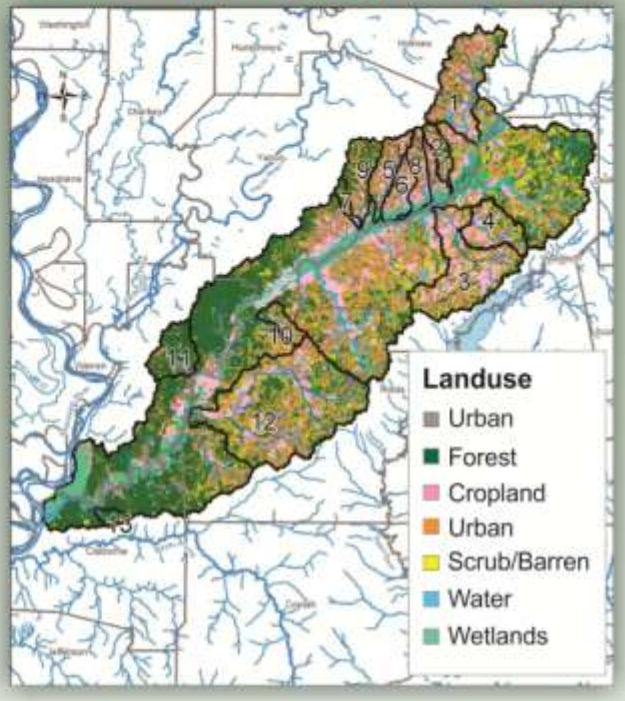


***Authority needed to combat flooding, erosion, and sedimentation problems which leads to streambank caving, loss of fish and wildlife resources, poor water quality and adds to problem of Gulf Hypoxia Zone.***





## Land Use in the Basin




## Environmental Stewardship

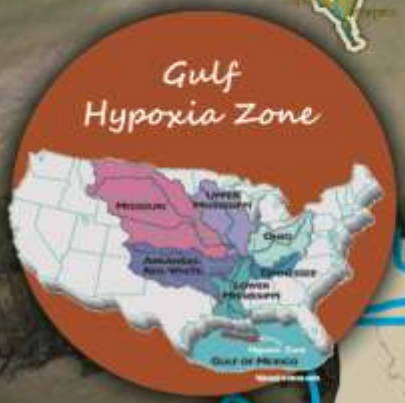
Nonpoint loading of sediment in a water body results from the transport of the material into receiving waters by the processes of mass wasting, head cutting, gullying, and sheet and rill erosion. Sources of sediment include:

- Agriculture
- Silviculture
- Rangeland
- Construction sites
- Roads
- Urban areas
- Mass wasting areas
- Gullies
- Surface mining
- In-channel and instream sources
- Historical landuse activities and channel alterations

## Value to the Nation

# Southwest Tributaries



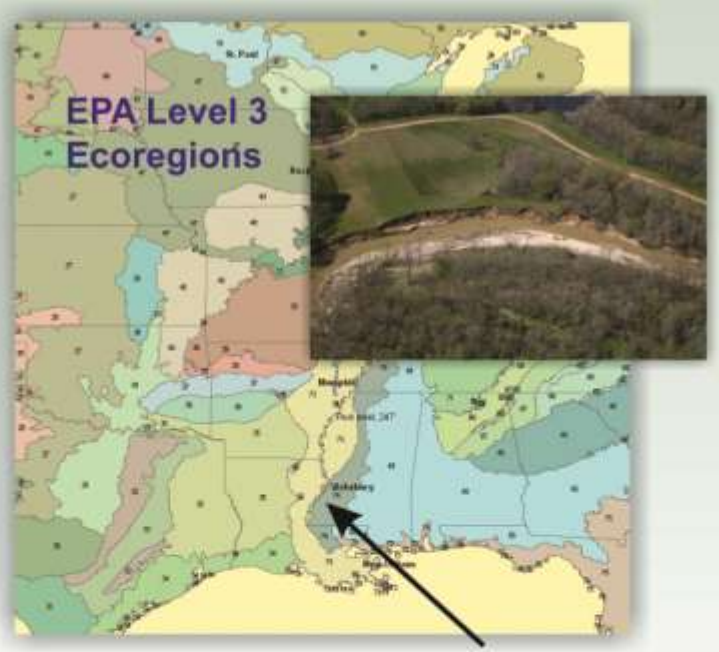



HINDS
Utica
Bayou Pierre
Crystal Springs
55
Port Gibson
CLAIBORNE
Hazlehurst
JEFFERSON
COPIAH
Fayette
LINCOLN
61
Natchez
ADAMS
Roxie
FRANKLIN
Meadville
Mississippi
Homochitto River
Crosby
Buffalo River
WILKINSON
Woodv
Centreville


***The basin comprises a drainage area of approximately 3,200 square miles. All or parts of nine counties in southwestern Mississippi are included – Adams, Amite, Claiborne, Copiah, Franklin, Hinds, Jefferson, Lincoln, and Wilkinson. The basin extends in a north-south direction approximately 60 miles from just north of Port Gibson, MS, t o the vicinity of the Mississippi-Louisiana state line on the south; it extends in an east-west direction approximately 55 miles from the Mississippi River on the west to Interstate 55 on the east. Three major streams---Buffalo River, Homochitto River, and Bayou Pierre drain most of the area and flow directly into the Mississippi River.***

## Environmental Stewardship

Seeking authority to combat flooding, erosion, and sedimentation problems which leads to streambank caving, loss of fish and wildlife resources, poor water quality and adds to problem of Gulf Hypoxia Zone.




**Mississippi Loess Plain 74**

Vicksburg District
Founded 1871
of the Mississippi Valley Division

## Value to the Nation

# Bayou Meto


***The project area includes Lonoke, Jefferson, Prairie, Arkansas, and Pulaski Counties and involves the study of 1,350 square miles in a 433,166 acre Improvement Project Area (IPA) with 369,874 acres of irrigated cropland.***

Jacksonville
Sherwood
40
Lonoke
70
PULASKI
Bayou Meto
Two Prairie Bayou
PRAIRIE
LONOKE
England
165
Wabbaseka
Stuttgart
79
ARKANSAS
JEFFERSON
Altheimer
Bayou Meto

## Pump Station No. 1/Reservoir

A pump station that takes excess surface water from the Arkansas River, pumps it up into a reservoir to utilize gravity flow, and puts it into a delivery system for irrigation use.

## Little Bayou Meto Pump Station

A pump station that evacuates water from the Bayou Meto Basin and reduces flood damage on farmland and stress to bottomland hardwood forests that benefit waterfowl.

## Continuing Authorities Program Section 205

SMALL FLOOD CONTROL PROJECTS of the Flood Control Act of 1948

*Provides for local protection from flooding by the construction or improvement of flood control works.*

## Flood Risk Management

The project includes a pump station to evacuate water from the Bayou Meto Basin and reduces flood damage on farmland and stress to bottomland hardwood forests that benefit waterfowl management.

Jacksonville and Sherwood, AR have requested participation in individual Section 205 projects designed to assist with small flood control projects which will improve Flood Risk Management potential for the communities.

## Environmental Stewardship

The project area includes 10,000 acres of herbaceous wetland complexes, along with riparian buffers and improvements to the Bayou Meto Wildlife Management Area to provide environmental restoration and enhancement features.

## Water Supply

The project has features which divert excess water from the Arkansas River via a delivery system that contains pump stations, incorporates a system of new canals, existing streams, and pipelines to deliver water to depleted areas.

## Project Features:

**107 Miles of New Canal**

**1,750 CFS Pump Station**

**Riparian Buffers**

**128 Miles of Channel Work**

**10,000 Acres of Herbaceous Wetland Complexes**

**132 Miles of Ditch Enlargements**

**465 Miles of New Pipeline**

Founded 1873 Vicksburg District of the Mississippi Valley Division

## Value to the Nation

# Lower Mississippi River Museum

## LMRM
### Lower Mississippi River Museum and Riverfront Interpretive Site

Authorized by Section 103 © of WRDA 1992 and amended by Section 508 (b) of WRDA 2000 and the Energy and Water Development Act of 2006.

***Congress authorized the Vicksburg District to construct the Lower Mississippi River Museum and Riverfront Interpretive Site in the form of a regional visitor center incorporating the old Motor Vessel Mississippi in conjunction with other potential riverfront development features planned by the City of Vicksburg, MS.***

**Visitation:**
Though no funds have been spent for promotion of the facility, visitation has grown from 11,000 to over 30,000 in the first two years of operation.

**Group Usage:**
The facility has been used for meetings and conferences by groups such as:
- State Chamber of Commerce
- Junior Auxiliary
- USGS
- Vicksburg Assoc. of Marketing Professionals
- Great MS Road Race
- Coast Guard
- AmeriCorps
- MS-Lou Agri Tourism
- Golding Barge

**Strengths:**
- Unique facility in the region
- Rising visitor numbers
- Tremendous opportunity for facility usage growth
- Attracts tourists to Vicksburg and Warren County

**Challenges:**
- Currently funded through MR&T program
- Shrinking available Federal funds
- Only funded through 12 Oct 2014

Founded 1873 Vicksburg District of the Mississippi Valley Division

Value to the Nation

# Mat Sinking Unit





The Mat Sinking Unit in concert with the Clearing and Snagging Unit, Bank Grading Unit and Mat Loading Unit supports the Regional Mississippi River and Tributaries (MR&T) Channel Improvement Program with strategic placement of articulated concrete mat along the river. The benefits include minimization of channel migration and protection of flood control structures.

## Current Mat Sinking Unit

- Built in 1948
- Multiple upgrades since construction
- Requires large labor force
- Antiquated and obsolete
- Safety regulation compliance challenges

***Mississippi Valley Division has initiated a re-design of the mat sinking unit.***

## New Mat Sinking Unit

- Smaller and more agile
- Require less labor to operate
- Incorporates latest technology
- Incorporates safety specifications

## Did you know?

- The Mat Sinking Unit maintains approximately 1000 river miles of main line Mississippi River
- Revetment from Head of Passes in Louisiana to Cairo, Illinois.
- The Mat Sinking Unit replaces on average 1% of revetment per year.
- The Mat Sinking Unit is a unique plant constructed in 1948 which underwent major modifications in 1968.

Value to the Nation

US Army Corps of Engineers®
Vicksburg District

Founded 1873
Vicksburg District
of the Mississippi Valley Division

# Funding Information

# Funding Information

| Cong Distr | Approp/Project | FY 14 Allocation | FY 15 President's Budget | Additional Capability Needs | FY 15 TOTAL CAPA-BILITY | FY 15 WORK WHICH COULD BE ACCOMPLISHED WITH ADDITIONAL FUNDS |
|---|---|---|---|---|---|---|
| **Investigations** | | | | | | |
| AR | Blakely Mt Dam, Lake Ouachita AR (Section 216) | 0 | 0 | 150 | **150** | Conduct recon level investigation to determine changed conditions and investigate the benefits of water supply to local industry and effects on current water use. |
| AR | DeGray Lake, AR (Section 216) | 0 | 0 | 150 | **150** | Conduct recon level investigation to determine changed conditions and investigate the benefits of water supply to local industry and effects on current water use. |
| AR | Narrows Dam, Lake Greeson, AR (Section 216) | 0 | 0 | 150 | **150** | Conduct recon level investigation to determine changed conditions and investigate the benefits of water supply to local industry and effects on current water use. |
| AR, LA | Ouachita and Black River, AR & LA (Secion 216) | 0 | 0 | 150 | **150** | Conduct recon level investigation to determine changed conditions and investigating bank erosion and caving along channel. Current authorization does not include bank stabilization. |
| AR, LA | Ouachita River Watershed, AR & LA | 0 | 0 | 150 | **150** | Conduct the Initial Watershed Assessment using a system based approach to identify water supply needs, FRM benefits, ecosystem restoration opportunities and to detetermine Federal interest & benefits. |
| LA, MS | Pearl River Basin Watershed, MS & LA | 0 | 0 | 150 | **150** | Conduct the Initial Watershed Assessment using a system based approach to identify water supply needs, FRM benefits, ecosystem restoration opportunities and to detetermine Federal interest & benefits. |
| AR, LA | Red River Basin Watershed, AR & LA | 0 | 0 | 150 | **150** | Conduct the Initial Watershed Assessment using a system based approach to identify water supply needs, FRM benefits, ecosystem restoration opportunities and to detetermine Federal interest & benefits. |
| AR | Red River Navigation, Southwest AR | 0 | 0 | 150 | **150** | Funds could be used to continue feasibility study in conjunction with the use of contributed funds. |
| **Total Investigations** | | **0** | **0** | **1,200** | **1,200** | |
| | | | | | | |
| | | | | | | |
| **Construction** | | | | | | |
| AR-4,LA-4,5 | Red River Below Denison Dam | 0 | 0 | 6,300 | **6,300** | Construction of Lee rehabilitation item 9A, II ($1,500), item 9B ($4,500) and gravel surfacing ($300). |
| AR-4, LA-4 | Red River Emergency | 0 | 0 | 19,600 | **19,600** | Fully fund construction of Dickson Revetment, Phase II. (3,500), Fully fund construction of Dickson Revetment, additional phase (15,500), Initiate design of Glycerine Revetment and Dikes.(300) Initiate design of Float Revetment Ph I, II and III.(300) |
| **Total Construction** | | **0** | **0** | **25,900** | **25,900** | |
| | | | | | | |
| | | | | | | |
| **Operation and Maintenance** | | | | | | |
| AR-4 | Blakely Mtn-Lake Ouachita | 7,904 | 7,558 | 18,166 | **25,724** | Coordinate existing water supply agreements ($5), inventory soil and vegetation ($75), Update Master Plan ($369), transfer from commercial power grid to service from Blakely Hydro power ($1,600), Dam maintenance ($275), campsite electrical service upgrade ($175) install electrical campsite services ($135), upgrade to 1974 water treatment plant ($200), upgrade to water and electrical systems ($150), replace two 1963 restrooms ($185), contracting services ($35), replace generator lubrication oil ($75), HSS inspections ($23), water control activities ($24), seismic safety review ($2), riprap blanket upstream side of dam ($12,000), recreation managment ($608), replace primary electric to Joplin ($45), upgrade Buckville boat ramp ($100), provide power from hydropower plant to project office and also provide security ($1,673), upgrade boat ramp, Tompkins ($80), install electrical services Buckville ($63), dam safety ($52), dam operations ($15), data gathering ($13), periodic inspections ($100) and replace old inefficient electrical motors. |
| AR-4 | DeGray Lake | 5,629 | 5,652 | 7,597 | **13,249** | Formal periodic inspections ($96), coordinate and negotiate water supply agreements ($20), p&s for intake cylinder gate ($168), recreation management ($1,140), replace office building ($2,857), water contral and quality analysis ($42), HSS ($8), data gathering ($16), field office statelon power ($713), road paving ($127), replace shower building ($160), install utilities ($478), replace waste water plants ($330), rehab flood gate ($6), rehab flood bulkhead ($6), replace expansion joints ($75), remove woody vegetation ($50), build ADA fishing pier ($52), construct boat ramp ($155), build picnic pavilion ($98), campground water hookups ($148), replace windows fee booths ($39), replace windows cabins ($55), repair waterfowl impoundment ($31), control hydrilla ($38), study water milfoil ($27), replace hot water heaters ($41), update master plan ($300), update EAP ($118), convert cultural data ($21), visitor center exhibits ($155), and replace lighting with LED ($27). |
| AR, LA, MS | Insp of Completed Works | 609 | 512 | 465 | **977** | Additional Critical Levee Inspections and Channel Inspections performed by OD-MP. Fully funding for the Levee Safety Program. ($465) |

| Cong Distr | Approp/Project | FY 14 Allocation | FY 15 President's Budget | Additional Capability Needs | FY 15 TOTAL CAPA-BILITY | FY 15 WORK WHICH COULD BE ACCOMPLISHED WITH ADDITIONAL FUNDS |
|---|---|---|---|---|---|---|
| AR-4 | Narrows Dam-Lake Greeson | 5,931 | 5,639 | 3,402 | **9,041** | Forest Management ($90), Periodic inspections, ($3), Fee Collection Contract, Admin & minor Repairs ($357), , Water control ($113), Seismic safety review ($4), Provide access for inspections ($17), Protect and Manage Shorelines ($55), HSS inspections ($64), Road paving ($300), Replace 1000' deteriorated underground electric line ($55), Purchase and installation of 4 courtesy boat docks ($75), Replace comfort station ($170), Purchase patrol boat motor ($25), Monitor dam and related facilities ($346), Real Estate Management for the Dam ($12), Joint cost for operations ($185), Rehabilitate campsites at Self Creek Recreation Area ($500), Replace 20 year old work barge ($75), Rehabilitate campsites at Parker Creek Recreation Area ($300), Replace project signs ($180), Replace comfort station ($180),Rehabilitate campsites at Cowhide Cove Recreation Area ($300), Update EAP ($6) |
| | NEPP | 158 | 0 | 0 | **0** | |
| AR-4,LA-5 | Ouachita & Black Rivers-Navigation Project | 11,188 | 9,234 | 3,795 | **13,029** | Fully fund dredging ($2,000); Replace high water pilings at locks and dams ($325), repair concrete base on hinged crest gate ($145), realignment of access to boat ramps ($250), bank stabilization and dock replacement ($550), demo 3 comfort stations and replace with ADA compliant ($325) and replace admin building at Columbia ($200). |
| AR-4 | Yellow Bend Port, AR | 115 | 3 | 481 | **484** | Perform maintenance dredging. |
| **Total Operation and Maintenance** | | **31,533** | **28,598** | **33,906** | **62,504** | |
| | | | | | | |
| **Regulatory Functions** | | **3,804** | **3,914** | **0** | **3,914** | |
| **Flood Control & Coastal Emergency** | | **406** | **429** | **0** | **429** | |
| | | | | | | |
| | **SUBTOTAL REGULAR APPROP** | **35,743** | **32,941** | **61,006** | **93,947** | |
| | | | | | | |
| | | | | | | |
| **MR&T Investigations** | | | | | | |
| AR, LA, MS | Collection & Study of Basic Data | 8,370 | 9,280 | 3,400 | **12,680** | Collection of data for flood prediction, flowline and geomorphic study efforts. |
| AR | Boeuf Tensas, Watershed, AR & LA | 0 | 0 | 150 | **150** | Conduct recon level investigation to determine changed conditions and investigating bank erosion and caving along channel. Current authorization does not include bank stabilization. |
| AR | Bayou Meto Watershed, AR | | 0 | 150 | **150** | Conduct recon level investigation to determine changed conditions and investigating bank erosion and caving along channel. Current authorization does not include bank stabilization. |
| **Total MR&T Investigations** | | **8,370** | **9,280** | **3,700** | **12,980** | |
| | | | | | | |
| **MR&T Construction** | | | | | | |
| AR, LA, MS | Mississippi River Levees | 13,455 | 12,155 | 23,500 | **35,655** | Construct Waterproof-Upper Lake Concordia, LA, Item 374-R ($10,000), Construct Magna Vista-Brunswick, MS, Item 465-L ($8,000), construct Lake Jackson to Palmetto, It 511L ($4,000) and Willow Pt Youngs Pt, LA It 457R ($1,500) |
| AR, LA, MS | Channel Improvement Dikes | 35,563 | 3,270 | 14,900 | **18,170** | Complete Construction Wilson Point Dikes ($5,400), Const Ben Lomand ($6,100) and Anconia Chute ($3,400) |
| AR, LA, MS | Channel Improvement Revetment | | 13,330 | 0 | **13,330** | |
| **Total MR&T Construction** | | **49,018** | **28,755** | **38,400** | **67,155** | |
| **MR&T Maintenance** | | | | | | |
| AR-4,LA-5 | Boeuf & Tensas Rivers | 3,939 | 2,485 | 992 | **3,477** | Repair 2 impeller bell housing/cones ($400), Repair guide rails & beams ($442) and Lake chicot PP inlet channel repairs ($150) |
| AR, LA, MS | Dredging Maint | 9,523 | 5,023 | 0 | **5,023** | |
| AR, LA, MS | Insp of Completed Works | 371 | 371 | 300 | **671** | Red River Backwater, Ouachita-Black River and OD-MP Inspections, levee certifications, channel inspections and I-Walls. Levee Safety requirements demand more detailed inspections.; Includes 463 miles of levees, 516 miles of channels, 125 drainage structures, 1 pumping plant & 15 weirs ($300) |
| AR, LA, MS | Mapping | 298 | 302 | 300 | **602** | Additonal mapping assistance for work in the CAD/GIS topographi,hydrographic or geospecial areas. |
| AR, LA, MS | Mississippi River Levees | 3,192 | 2,331 | 1,700 | **4,031** | Levee Slide Repairs that threaten the integrity of the levees threaten life and safety ($1,200). Operation and maintenance of mitigation areas ($500) |
| AR-1,4 | North Bank, Arkansas River | 287 | 294 | 300 | **594** | Levee Slides/Stone for Levee Surfacing |
| AR, LA | Red-Ouachita Basin Levees | 0 | 0 | 500 | **500** | 500,000 could be used for repairs affecting levee stability and further investigation of other issues along the levee/floodwall |
| AR, LA, MS | Channel Improvement (Revetments & Dikes) | 14,052 | 15,052 | 18,000 | **33,052** | Stone repairs to existing dikes damaged during 2011 flood ($12,000) and repair to revetment and dikes for channel realignment ($6,000) |

| Cong Distr | Approp/Project | FY 14 Allocation | FY 15 President's Budget | Additional Capability Needs | FY 15 TOTAL CAPA-BILITY | FY 15 WORK WHICH COULD BE ACCOMPLISHED WITH ADDITIONAL FUNDS |
|---|---|---|---|---|---|---|
| AR-1,4 | South Bank, Arkansas River | 193 | 198 | 300 | **498** | Levee Slides/Stone for Levee Surfacing |
| **Total MR&T Maintenance** | | **31,855** | **26,056** | **22,392** | **48,448** | |
| | **SUBTOTAL MR&T APPROP** | **89,243** | **64,091** | **64,492** | **128,583** | |
| **TOTAL ALL APPROPRIATIONS** | | **124,986** | **97,032** | **125,498** | **222,530** | |
| | Investigations | 8,370 | 9,280 | 4,900 | **14,180** | |
| | Construction | 49,018 | 28,755 | 64,300 | 93,055 | |
| | Maintenance | 63,388 | 54,654 | 56,298 | **110,952** | |
| | | 120,776 | 92,689 | 125,498 | **218,187** | |

# Supplemental Funding

# Vicksburg District
# Operation Watershed Recovery
# Projects

**Items Funded**

**109**

**Funding Required for 109 Items**

**$254 M**

**Items Complete**

**80**

**Items recently awarded or under construction**

**29**

**Items to be initiated**

**0**


✓ Indicates Completed Item

**USACE FRAGO**

| Risk Classification | Category |
|---|---|
| Class I | MRL |
| Class II | Dredge |
| Class III | CI-Revetment |
| Class IV | O&M |
| | Structure |

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
# Supplemental Funding - PL 112-77

## O&M and MR&T, Construction and Maintenance (FRM, NAV)

**Location:** Throughout the Vicksburg District.

**Description:** The Mississippi River and Tributaries (MR&T), a legacy flood damage reduction system performed, as designed under tremendous and prolonged pressure from the historic 2011 flood event. It is the Flood or Record for most gauges between Cape Girardeau, MO and the Gulf of Mexico. Not a single life was lost to flooding in the areas across seven states protected by the MR&T system. Since its inception, the MR&T system is credited with preventing $612 billion, or in excess of half a trillion dollars, in cumulative flood damages. At an investment level of $14 billion, those savings result in a $44 return on every $1 invested. The 2011 flood fight is the first time the total watershed system required operation in a synchronized manner in order to manage the highest level of water it has ever seen.

**Issues**: While the MR&T system performed as designed and managed historical water levels during the Flood of 2011, many sites received damage that threatened the system's performance in future flood seasons. Many of the Flood's critically damaged sites have been repaired within the last 18 months but it is vital to repair the remaining damaged sites to preserve the systems functionality and restore the flood protection provided by the MR&T system.

**Importance:** Flood control systems protect lives and property. Levees hold back floodwaters; river training structures improve navigation, stabilize bends, and reduce maintenance dredging requirements. Revetment construction maintains channel alignment and protects the banks from erosion while numerous other facilities serve the many public needs across the area.

**Risk:** Subsequent flood seasons will require extreme vigilance and advanced preparedness to ensure safety and security of citizens, infrastructure and industry. Safe and secure Corps facilities, as well as operation of the MR&T system, is required to preserve the Nation's valuable infrastructure investment.

**Consequence:** Catastrophic damage to the navigation channel, river banks, and adjacent mainline levee is likely to occur if the system is not repaired/constructed as planned. During the Flood of 2011 an estimated 1.4 million residential and commercial structures, 10 million acres of land, as well as 3.6 million people would have been impacted had the MR&T not functioned as designed.

Figure 1.
LeLand – LaGrange Damage

Figure 2.
Leland – LaGrange Repairs Nearing Completion

**Status: All critical items will be complete by 31 December 2014.**

**Sponsor/Customer:** Mississippi Levee Board, Fifth Louisiana Levee Board, Southeast Arkansas Levee District, Red River Waterway Commission, Ouachita River Valley Association

**Congressional Interest**: Senate: Boozman and Pryor (AR), Landrieu and Vitter (LA), Cochran and Wicker (MS); House: Crawford (AR-1), Cotton (AR-4), Alexander (LA-5), Thompson (MS-2), and Harper (MS-3).

# Investigations

# Investigations

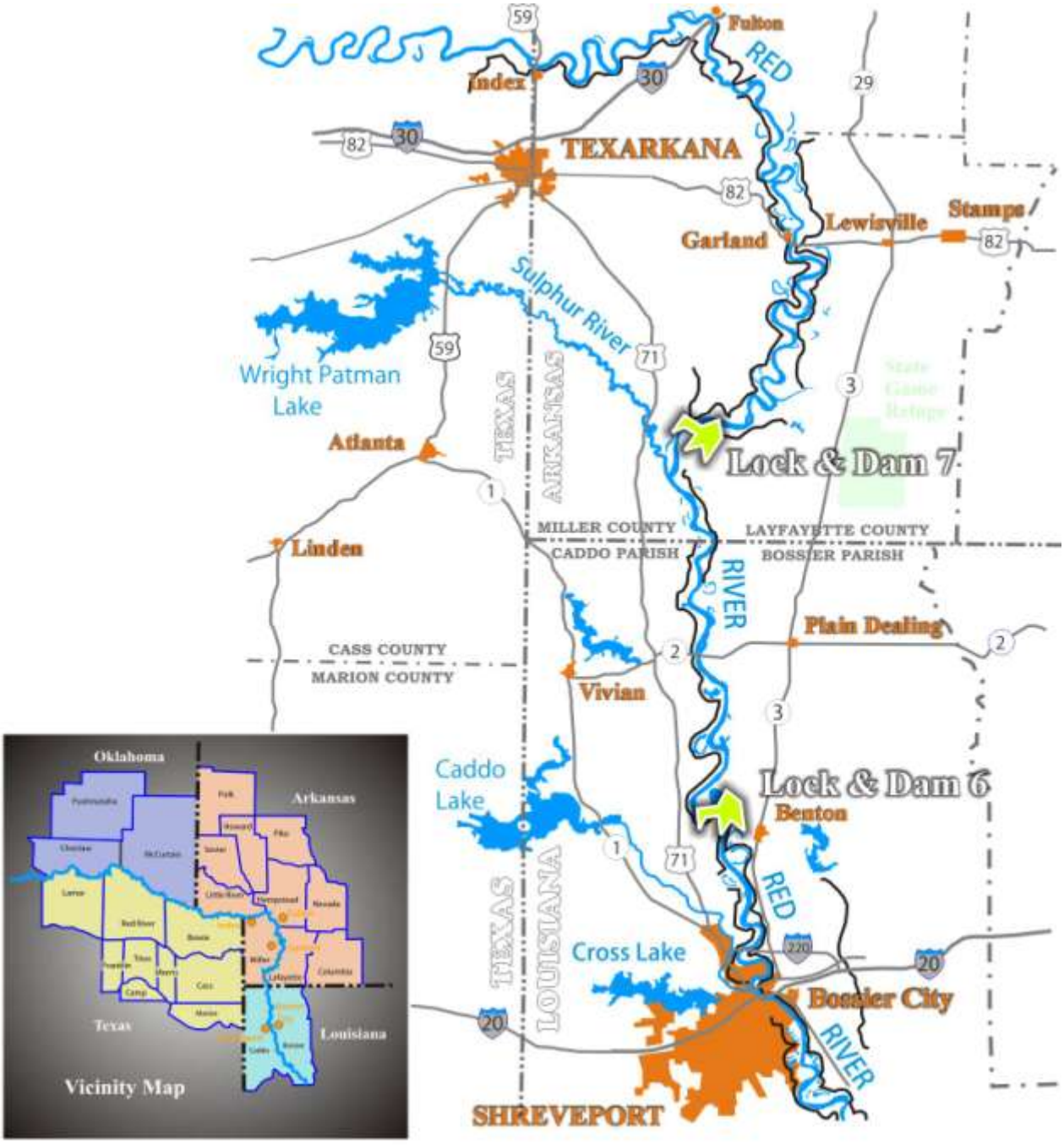
# Investigations

The major objective of the Investigations program is to study projects that provide solutions to water resource problems. The Corps undertakes studies in response to directives (authorizations) from Congress. Congressional authorizations are contained in public law and in resolutions of either the House Public Works and Transportation Committee or the Senate Environment and Public Works Committee.

Most studies are conducted in two phases--reconnaissance and feasibility. The reconnaissance phase is fully funded by the Federal Government and is usually completed in 12 months. The purpose is to define the problem, opportunities, and identify potential solutions. It also determines whether or not planning should proceed into the feasibility phase based on a preliminary appraisal of the Federal interest, cost, benefits, and environmental impacts of the identified potential solution. The phase is completed upon the signing of the Feasibility Cost-Sharing Agreement (FCSA) by the Corps and a project sponsor.

The feasibility phase can take up to 3 years to complete and is cost shared equally between the Federal Government and the non-Federal sponsor. The report results in recommendations to Congress for or against Federal participation in solutions to the water resource problem and opportunities identified in the study. A recommendation for Federal participation identifies a recommended plan/project, generally for construction authorization and funding.

The Preconstruction, Engineering and Design Studies (PED) phase of project development encompasses all planning and engineering necessary for project construction, after release of the report and Division Engineer's public notice on a favorable study. Preparation of design memorandums and plans and specifications will be cost shared in accordance with the cost sharing required for project construction.




**Red River Navigation,**
**Southwest Arkansas**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
# Red River Navigation, Southwest AR, AR

1983 SAA (PL 98-63), 30 Jul 83, and WRDA 1996, Sec 402

## Investigations (NAV)

**Location:** The study area is located in northwest Louisiana and southwest Arkansas and includes the 135 miles of the Red River between Shreveport, LA, and Index, AR.

**Description:** The study is investigating alternatives for extending navigation from Shreveport, LA, to Index, AR. Unless additional economic benefits can be found, the project is not economically feasible. The plan that comes closest to meeting the test of economic justification consists of two locks and dams between Shreveport, LA, and Garland, AR, a distance of approximately 82 river miles.

**Issues:** The sponsor has posed several concerns regarding the prior transportation savings rate analysis. As a result, an agreement was reached to have the rate analysis conducted again through the Corps Navigation Center of Expertise using non-Federal sponsor contributed funds and with the understanding that the sponsor will provide an updated user survey.

The District and the Non-Federal sponsor amended the Feasibility Cost-Sharing Agreement (FCSA) in FY13 to reflect allowance of contributed funds. However, the sponsor had funding revoked that had been set aside for the contributed funds. The Corps received a letter from Governor Beebe requesting that the Corps keep the study active until the end of FY14. The State of Arkansas anticipates having funding reinstated around July 2014.

**Importance:** The study area includes significant tonnages susceptible to waterborne transportation. The project is important to the States of Louisiana and Arkansas, the Red River Valley Association, Red River Waterway Commission, and the Arkansas Red River Commission.

**Risk:** Loss of significant National Economic Development and regional benefits if not constructed.

**Consequence:** Commodities continue to move at a higher transportation cost to the ultimate consumer.

Red River

**Activities for FY 14**: None. No funds are available. Sponsor willing to contribute if funds become available.

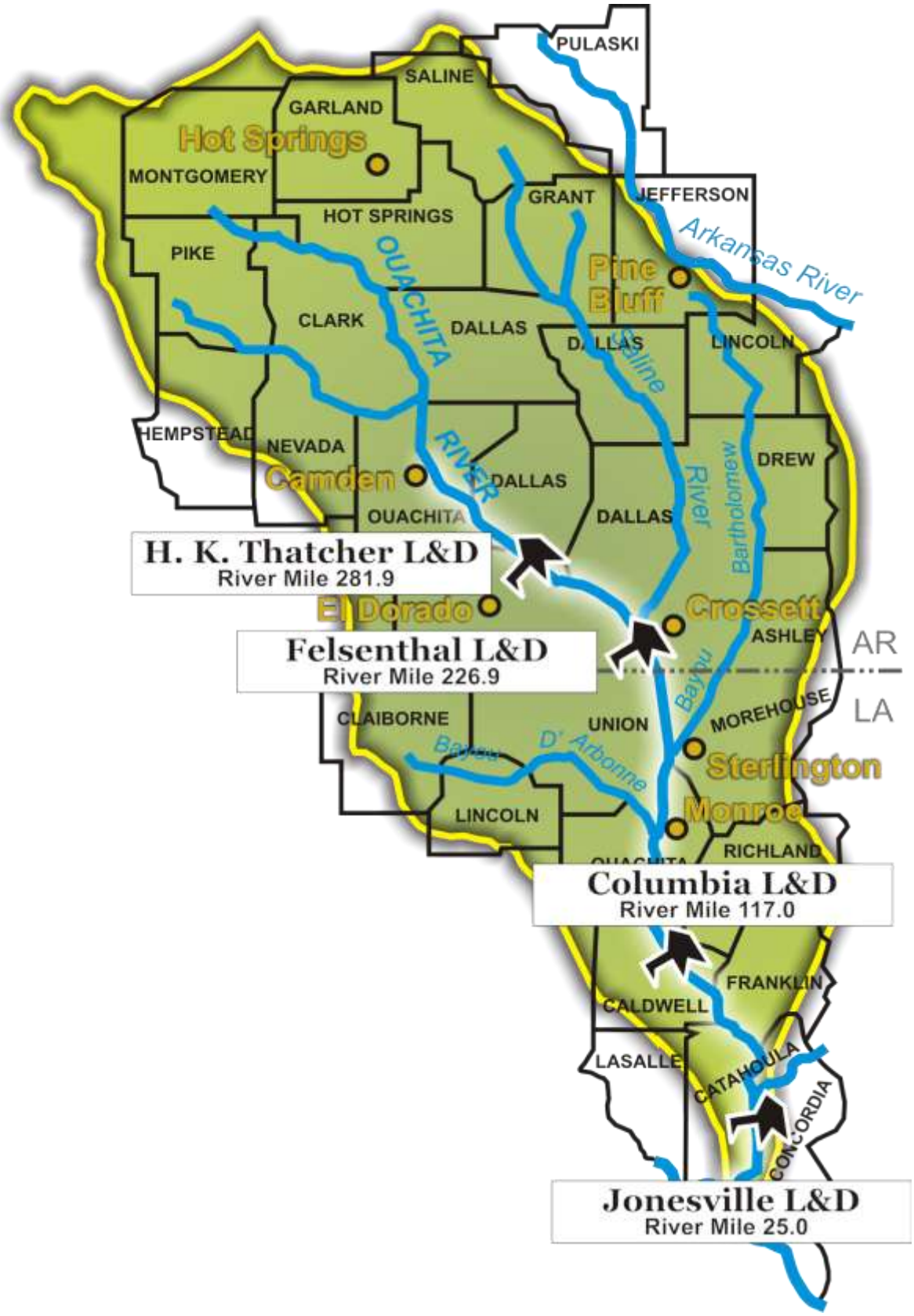
**Acquisition Strategy:** None.

**Amount That Could Be Used in FY 15**: Funds of $150,000 could be used to continue feasibility study in conjunction with the use of contributed funds.

**Project Sponsor/Customer:** Arkansas Red River Commission

**Congressional Interest**: Senate: Pryor and Boozman (AR), Landrieu and Vitter (LA); House: Cotton (AR-4) and Fleming (LA-4).

| Phase | Estimated Federal Cost of Phase | Federal Funding Thru FY 13 | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|---|---|
| Feasibility | $4,370,000 | $4,068,000 | $0 | $0 | $150,000 |




**Ouachita River Watershed**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
## Ouachita and Black River, AR and LA
FCA 70 (Sec 216), as amended by WRDA 86.

## Investigations (NAV)

**Location:** The Ouachita River Watershed is located in Arkansas and Louisiana.

**Description:** A reconnaissance study will serve as a basis for both the Corps and other agencies to examine current and future problems and needs in the Ouachita River Basin related to changes in the existing project and flood damage reduction, navigation, water supply (surface and ground water), bank stabilization, ecosystem restoration, and recreation as required in order to assess the extent of these problems and the Federal interest in measures to address them.

**Issues:** A reconnaissance study is necessary to address the changes experienced since the completion of the Ouachita and Black Rivers.

**Importance:** This potential reconnaissance plan has strong support by the Ouachita River Valley Association and other stakeholders who have been working for several years to initiate a watershed-level study for the area. A reconnaissance study will serve as a basis for both the Corps of Engineers and other agencies related to flood damage reduction, navigation, water supply (surface and ground water), bank stabilization, ecosystem restoration, and recreation as required in order to assess the extent of these problems and the Federal interest in measures to address them.

**Risk:** Current authority does not address bank stabilization for the project and recent flood events are causing erosion of the channel and impacting navigation. Additionally, water supply is becoming critical both from an agricultural and municipal and industrial standpoint within the basin. If these problems are not addressed, they will impact the economic growth within the basin.

**Consequence**: If not funded, investigation of possible solutions to water resource problems and needs within the basin will be delayed; potentially increasing the damages and negative impacts associated with flooding, agricultural water needs, and the environmental habitat.


**Activities for FY 14**: None.

**Acquisition Strategy:** None.

**Amount That Could Be Used in FY 15**: Funds in the amount of $150,000 could be used to conduct reconnaissance study investigating bank erosion and caving near levee toes and potential ecosystem restoration opportunities.

**Project Sponsor/Customer:** Ouachita River Valley Association

**Congressional Interest**: Senate: Boozman and Pryor (AR), Vitter and Landrieu (LA); House: Cotton (AR-04), Fleming (LA-4), and McAllister (LA-5).

| Phase | Estimated Federal Cost of Phase | Federal Funding Thru FY 14 | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|---|
| Reconnaissance | $150,000 | $0 | $0 | $150,000 |


**Ouachita River Basin Watershed, AR and LA**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet

## Ouachita River Basin Watershed, AR and LA

Section 729 of WRDA of 1986 as amended by Section 202 of WRDA 2000

## Investigations (FRM) – NEW START

**Location:** The Ouachita River originates in Polk County, Arkansas, and flows 510 miles in a southerly direction to Jonesville, Louisiana, where it converges with the Tensas and Little Rivers to form the Black River.

**Description:** Ouachita River basin is one the most environmentally, economically and culturally diverse watersheds in the entire Mississippi River Watershed, covering 19,000 square miles across south-central Arkansas and north-central Louisiana (Figure 1). The Ouachita River originates in Polk County, Arkansas, and flows 510 miles in a southerly direction to Jonesville, Louisiana, where it converges with the Tensas and Little Rivers to form the Black River. The Black River meets the Red River 41 miles south of Jonesville. About 28 miles below the mouth of Black River, the Red River comes to a junction with the head of the Atchafalaya River and the western end of the 7-mile-long Old River, which historically linked these rivers to the Mississippi River. Fifty-nine percent of the watershed is forested and twenty-nine percent is agricultural land. It contains one National Forest, three National Wildlife Refuges, twelve Arkansas Wildlife Management Areas and four Louisiana Wildlife Management Areas. Major cities include Hot Springs and Camden, Arkansas and Monroe, Louisiana. The Ouachita River basin contains a wide range of water resources infrastructure and provides a unique opportunity to demonstrate a watershed-based Integrated Water Resources Management (IWRM) budgeting approach consistent with the National Watershed Vision.

**Issues:** Currently, no strategic plan for the Ouachita River Watershed exists that allows decision-makers and stakeholders to prioritize activities within the basin. Water resources problems include flooding of urban and rural properties. Bank caving along the river is endangering levees that provide urban and rural flood protection. During October 2009, high flows were threatening levees in several locations. Future bank caving could cause levee failures or significant damage to public infrastructures adjacent to or located on the banks. These damages could lead to significant flooding of area development and/or potential loss of life. Significant problems with navigation on the Ouachita River have been experienced in recent years because authorized cutoffs were never constructed and the existing radius of bendways above Monroe, Louisiana, is too small for tows to make the turns without "light loading" of barges.

The Louisiana and Arkansas Departments of Environmental Quality (LDEQ and ADEQ) has been monitoring water quality in the Ouachita/Black Basin and has concluded that most streams within this basin have fair water quality. Sources of water quality concern typically stem from agricultural and forestry run-off, and municipal and stormwater discharges. Natural resources within the Ouachita River Basin include but are not limited to several national wildlife refuges (Felsenthal, D'Arbonne, Upper Ouachita, Catahoula) and several state-operated wildlife management areas.

**Stakeholder Concerns:** Waterway users indicate a desire for enhanced utilization of all business lines and a desire to put together a comprehensive plan to allocate resources within the Ouachita watershed.

**Scope of Study:** A reconnaissance study will serve as a basis for both the Corps and other agencies to examine current and future problems and needs in the Ouachita River Basin related to flood damage reduction, navigation, water supply (surface and ground water), bank stabilization, ecosystem restoration, and recreation as required in order to assess the extent of these problems and the Federal interest in measures to address them.. There are potential opportunities to provide value to the Nation in navigation (NAV), flood risk management (FRM), environmental restoration (ENR), hydropower (HYD), water supply (WS), and recreation (REC) business lines.

**Possible Solutions**: Problems have been identified in the watershed including channel sedimentation accumulation and bank stabilization issues. Opportunities exist to investigate other uses for the waterway outside of the designed navigation project including incorporating bank stabilization practices into the current management of the program and identifying potential ecosystem restoration options throughout the watershed

**Sponsor:** The Ouachita River Valley Association (ORVA) is poised and committed as a partner with the Vicksburg District to deliver sustainable water resource solutions within an IWRM, systems-based approach. The 100-year-old ORVA (FRM, NAV, ENV, WS and REC) is uniquely positioned as a catalyst for strategic partnership development within the Ouachita Watershed. MVK is continually engaged with ORVA across a wide range of water resources in the Ouachita Watershed.

**Cost:** $150,000


**Blakely Mountain Dam and Lake Ouachita, Arkansas**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet

## Blakely Mountain Dam-Lake Ouachita, AR

Section 216 of the River and Harbor and Flood Control Act of 1970

**Investigations (FRM) – NEW START**

**Location:** Located adjacent to the National Scenic 7 Byway, just north of Arkadelphia, Arkansas, lies DeGray Lake.

**Description:** Lake Ouachita was formed when Blakely Mountain Dam was built across the Ouachita River in 1953. Lake Ouachita has over 690 miles of shoreline and a surface area of over 40,000 acres. Blakely Mountain Dam and Lake Ouachita is an economic engine for the local and regional area. The lake produces in excess of $17 million in direct and economic benefits to the area. The storage capacity is 2,768,000 acre-feet.

**Issues:** The opportunity for use of excess water from surface pumping is available to many users in the area and recent deficits in the region are forcing industries to look to new sources of clean water.

Lake Ouachita is a popular recreational facility for sport fishermen and boating enthusiasts.

**Stakeholder Concerns:** Stakeholders have asked USACE to explore the opportunity for use of excess water from surface pumping for potential users in the area. Recent droughts have made water supply questions come to the forefront.

**Scope of Study:** A Section 216 investigation of providing the benefits of excess water supply to local and regional industry can be determined and reach new user groups not originally intended when the design project originated.

**Blakely Mountain Dam-Lake Ouachita, AR**

**Possible Solutions**: Possible solutions would be determined during the Section 216 investigation.

**Sponsor:** No sponsor has been identified at this time.

**Cost:** $150,000


DeGray Lake, Arkansas

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
## DeGray Lake and Dam, AR
Section 216 of the River and Harbor and Flood Control Act of 1970

**Investigations (FRM) – NEW START**

**Location:** DeGray Lake and Dam are located adjacent to the National Scenic 7 Byway, just north of Arkadelphia, Arkansas.

**Description:** DeGray Lake spans 208 miles of shoreline and 13,800 acres. Completed in 1972, the earthen dam backs up the waters of the Caddo River some 27 miles creating DeGray Lake. Although recreation plays a major role in every day activity, hydropower makes this lake one of the most efficient and energy producing projects in the South. DeGray Lake holds the distinction as the first "pump back capable" impoundment in the history of the Corps of Engineers. A re-regulation dam forms a 400-acre impoundment directly below the main lake that serves as a storage basin for pump back capable features. During designated times, i.e. drought, the 28,000 KW generator can be reversed pulling water out of the Lower Lake into the main lake to be utilized again for hydropower generation. The 400-acre Lower Lake also serves as an ideal waterfowl refuge. DeGray Dam and Lake is an economic engine for the local and regional economy and produces in excess of $13 million in direct economic benefits to the area. The project consists of an earth filled dam, power plant and lake for hydropower generation. Storage capacity of the lake is 495,100 acre-feet. The excess water supply provides opportunity for local interest to capitalize on its uses to stimulate new industry growth not captured when the project was authorized.

**Issues:** The opportunity for use of excess water from surface pumping is available to many users in the area and recent deficits in the region are forcing industries to look to new sources of clean water.

DeGray Lake is a popular recreational facility for sport fishermen and boating enthusiasts.

**Stakeholder Concerns:** The opportunity for use of excess water from surface pumping is available to many users in the area and recent deficits in the region are forcing industries to look to new sources of clean water.

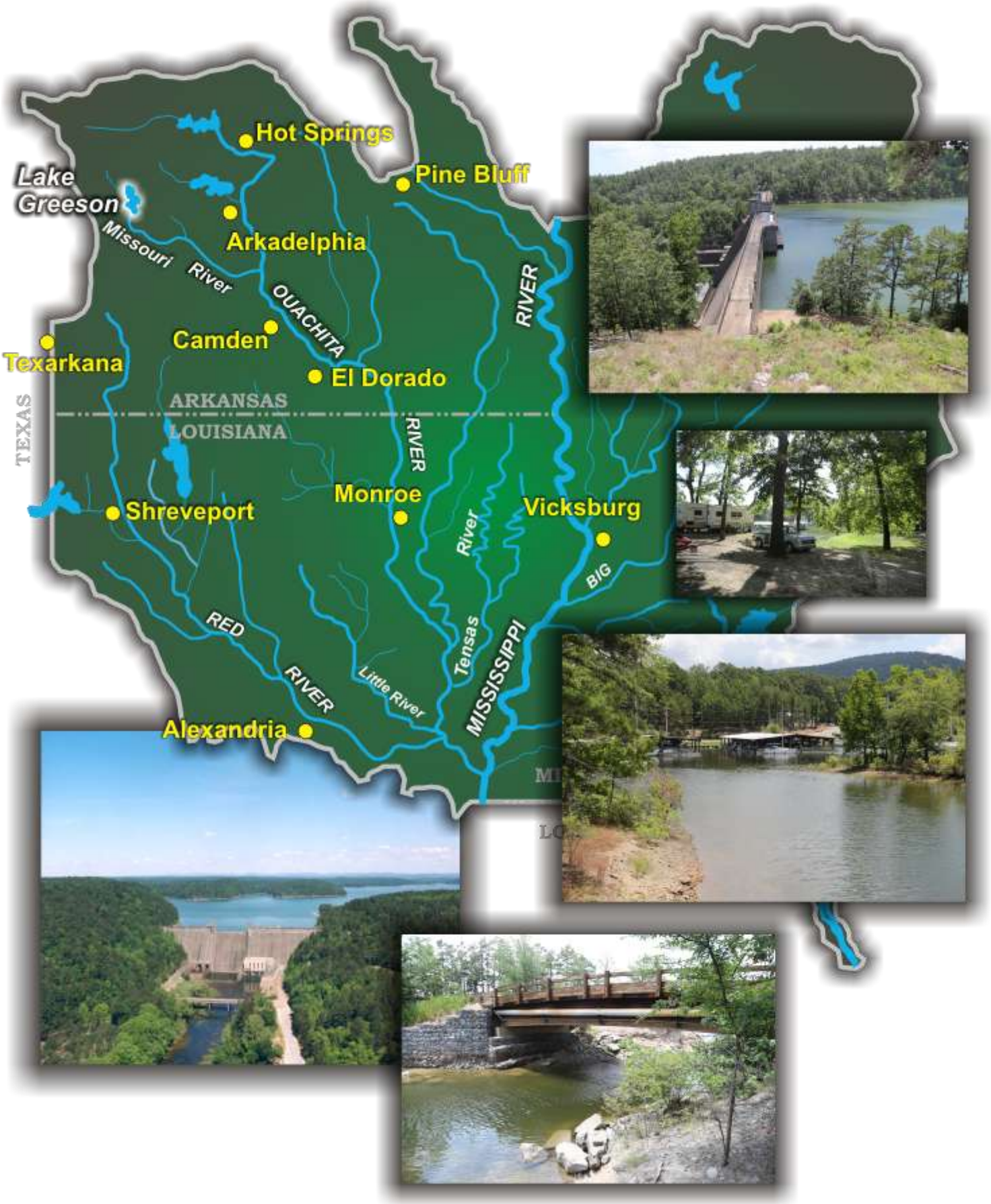
**DeGray Lake and Dam, AR**

**Scope of Study:** A Section 216 investigation of the benefits of excess water supply to local and regional industry can be determined and reach new user groups not originally intended when the design project originated.

**Possible Solutions**: Possible solutions would be determined during the Section 216 investigation.

**Sponsor:** No sponsor has been identified at this time.

**Cost:** $150,000




**Narrows Dam and Lake Greeson, AR**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet

## Narrows Dam and Lake Greeson, AR

Section 216 of the River and Harbor and Flood Control Act of 1970

**Investigations (FRM) – NEW START**

**Location:** The Narrows Dam/Lake Greeson Project is located on the Little Missouri River in Pike County, Arkansas.

**Description:** The project consists of a concrete dam (completed in 1951), power plant and lake for hydropower production. Storage capacity of the lake is 407,000 acre-feet. The lake produces an excess of $5 million in direct economic benefits to the area.

**Issues:** The opportunity for use of excess water from surface pumping is available to many users in the area and recent deficits in the region are forcing industries to look to new sources of clean water.

Lake Greeson is a popular recreational facility for sport fishermen and boating enthusiasts.

**Stakeholder Concerns:** The opportunity for use of excess water from surface pumping is available to many users in the area and recent deficits in the region are forcing industries to look to new sources of clean water.

**Scope of Study:** A Section 216 investigation of the benefits of excess water supply to local and regional industry can be determined and reach new user groups not originally intended when the design project originated.

**Narrows Dam and Lake Greeson, AR**

**Possible Solutions**: Possible solutions would be determined during the Section 216 investigation.

**Sponsor:** No sponsor has been identified at this time.

**Cost:** $150,000


**Red River Basin Watershed, AR and LA**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet

## Red River Basin Watershed, AR and LA

Section 729 of WRDA of 1986 as amended by Section 202 of WRDA 2000

## Investigations (FRM) – NEW START

**Location:** The Red River Basin Watershed is approximately 5,900,000 acres. The river is the southernmost major right tributary of the Mississippi, and the southernmost major river system in the Great Plains.

**Description:** Within the Vicksburg District, the Red River includes 200 plus miles of the Red River, five locks and dams, 21 Federal recreation areas and 5 public ports. Major tributaries of the Red River Basin in the Vicksburg District include the Ouachita and Sulphur Rivers and Loggy Bayou.

**Issues:** Problems have been identified in the watershed including accumulation of sediment within the river channel and bank stabilization issues. Opportunities exist to investigate other uses for the waterway outside of the designed navigation project including deepening of the channel to increase the amount of tows on the river and ecosystem restoration options throughout the watershed

The Louisiana and Arkansas Departments of Environmental Quality (LDEQ and ADEQ) has been monitoring water quality in the Red River Basin and has concluded that most streams within this basin have fair to good water quality. Sources of water quality concern typically stem from agricultural and forestry run-off, and municipal and stormwater discharges. Natural resources within the Red River Basin include but are not limited to several national wildlife refuges (Red River, D'Arbonne, Upper Ouachita, Catahoula) and several state-operated wildlife management areas (Bodcau, Loggy Bayou, Sulphur River).

**Stakeholder Concerns:** Stakeholder concerns in the area revolve around navigation and environmental restoration/ protection and non-point source pollution.

**Red River at Grand Ecore near Natchitoches, LA**

**Scope of Study:** Watershed Planning is an approach for managing water resources within specified drainage areas or watersheds and addresses problems in a holistic manner that reflects the interdependency of water uses, competing demands, and the desires of a wide range of stakeholders in addressing watershed problems and opportunities. Reconnaissance level investigations will focus on identifying changed existing conditions within the project area, and based on current conditions, identify Corps and other partner's opportunities to stabilize channels, reduce sedimentation, and restore aquatic habitat. There are potential opportunities to provide value to the Nation in the NAV and ENR business line.

**Possible Solutions**: Problems have been identified in the watershed including channel sedimentation accumulation and bank stabilization issues. Opportunities exist to investigate other uses for the waterway outside of the designed navigation project including deepening of the channel to increase the amount of tows on the river and ecosystem restoration options throughout the watershed

**Sponsor**: The Red River Waterway Commission or the Red River Valley Association

**Cost:** $150,000

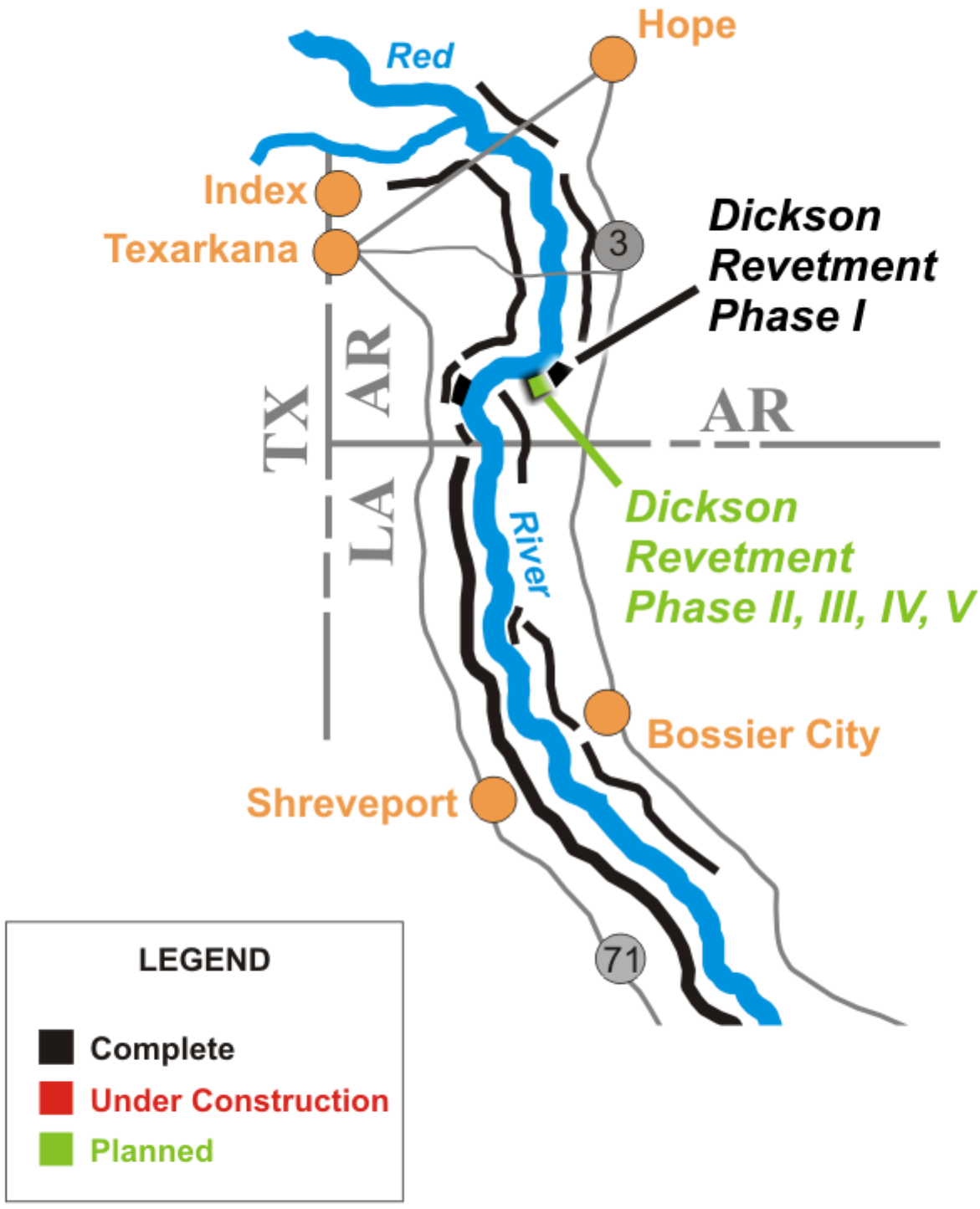
# Construction

# Construction

# Construction

The main objective of a construction program is to complete authorized and appropriated projects as economically and quickly as practicable within program constraints and consistent with national priorities.

Under the provisions of a cost-shared project, prior to initiation of construction, the non-Federal sponsor and the government enter into a Project Partnership Agreement (PPA). The PPA describes all of the requirements and responsibilities relating to construction of the project including items of local cooperation required from the non-Federal




**Red River**
**Emergency Bank Protection**
**Arkansas, Louisiana, Oklahoma and Texas**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet

## Red River Emergency Bank Protection, AR, LA, OK, TX

Rivers and Harbors Act of 1968; Water Resources Development Act of 1976

## Construction (NAV)

**Location:** The project is located in northwest Louisiana, southwest Arkansas, southeast Oklahoma, and northeast Texas, along the Red and Old Rivers between the mouth of Old River at its juncture with the Mississippi River and Denison Dam, Texas.

**Description:** The project provides for protection of critical infrastructure and land along the river. The project plan provides for revetment, dikes, or cutoffs that can be accomplished in advance of developing the design for the entire project.

**Issues:** Dickson Phase I of V is complete, but with only limited success as the remaining phases are needed to prevent continued erosion towards a levee in the Long Prairie Levee District in Arkansas.

**Importance:** These project features are essential to maintaining the existing river channel.

**Risk:** Without funding, additional bank protection work cannot continue.

**Consequence**: Delay in bank stabilization will endanger levees, public roads and bridges, and other improvements to the river due to erosion.

Dickson Revetment Phase I

**Activities for FY 14**: None.

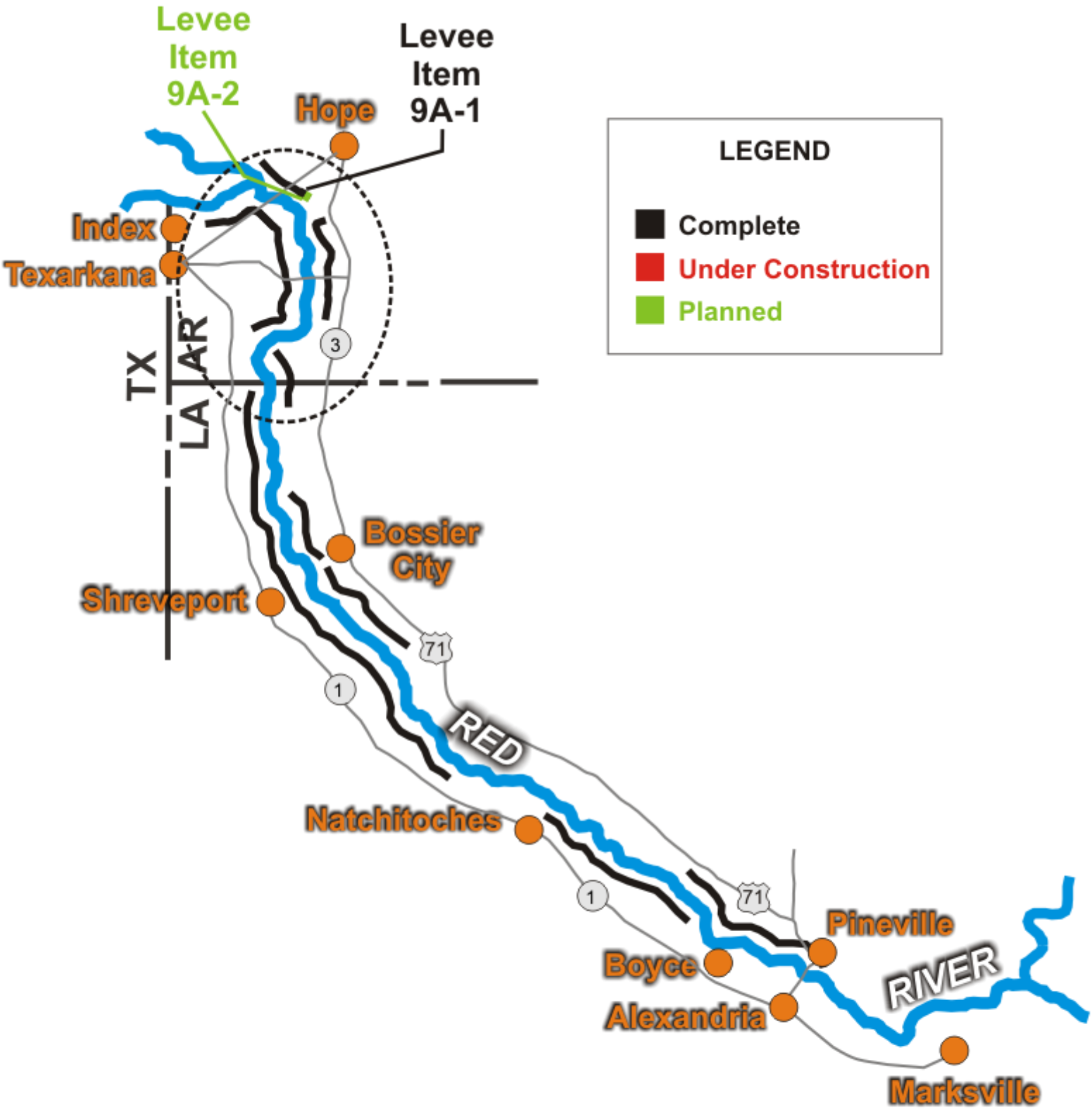
**Acquisition Strategy:** No contracts are scheduled to be awarded in FY 14.

**Amount That Could Be Used in FY 15**: Funds in the amount of $19,600,000 could be used to fully fund Dickson Revetment, Phases II ($3,500,000), Fully Fund construction of Dickson Revetment additional phase ($15,500,000)and initiate design of Float Revetment Phases I, II, and III ($300,000) and Glycerine Revetment and Dikes ($300,000).

**Project Sponsor/Customer:** Multiple local levee districts

**Congressional Interest**: Senate: Pryor and Boozman (AR), Vitter and Landrieu (LA); House: Cotton (AR-4) and Fleming (LA-4).

| Phase | Estimated Federal Cost of Phase | Federal Funding Thru FY 13 | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|---|---|
| Construction | $144,868,000 | $144,868,000 | $0 | $0 | $19,600,000 |




**Red River**
**Below Denison Dam,**
**Arkansas and Louisiana**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
# Red River Below Denison Dam, AR, LA, and TX

Section 10, FCA 46; E&WDAA 92, 93, 94, 95, 96, 98, 02, 03, 04, 05, 06, 07, 08, 09, 10

## Construction, FRM

**Location:** Project facilities are located along the Red River from the vicinity of Index, AR, to Boyce, LA, along the right bank, and to Pineville, LA, along the left bank.

**Description:** The overall project provides flood protection to about 1.7 million acres, half of which are located behind levees. The project protects the flood plain from crop damage; loss of livestock; damage to levees, railroads, highways, industries, and other river and urban development. The authorized project provides for enlargement and/or rehabilitation of existing levees and construction of new levees or bank protection or channel realignment where levee setbacks are impossible or uneconomical.

**Issues:** These project features are essential to maintenance of the existing levee system. Currently these levee systems protect over 103,000 people in AR and LA. Prior levee rehabilitation work did not include new standards that have been developed post Hurricane Katrina. Levees continue not to meet current inspection standards making them ineligible for PL 84-99 funds; therefore, creating higher potential for poor performance during flood events resulting in continued flood damage to homes, farms, and other improvements. Levee rehab is required to achieve positive levee evaluations. There is risk of increased flood insurance premiums with levee decertification.

**Importance:** These project features are essential to maintenance of the existing levee system. Currently this levee system protects over 103,000 people and 1.7 million acres of fertile farmland in AR and LA.

**Risk:** Without funding, additional levee rehabilitation cannot be completed. This levee system protects over 103,000 people and 1.7 million acres of fertile farmland in AR and LA. Levee rehab is required to achieve positive levee evaluations. There is risk of increased flood insurance premiums with levee decertification.

**Consequence**: Without funding, flood protection for the area could be compromised and local levee districts may face levee decertification.

Levee Item 9A-I

**Activities for FY 14**: None

**Acquisition Strategy:** No contracts are scheduled to be awarded in FY 14.

**Amount That Could Be Used in FY 15**: Funds in the amount of $6,300,000 could be used to fully fund completion of levee rehabilitation Items 9A Phase II ($1,500,000) and item 9B ($4,500,000) in southwest Arkansas and complete design on Levee on gravel surfacing of Louisiana levees ($300,000).

**Project Sponsor/Customer:** Multiple local levee districts

**Congressional Interest**: Senate: Boozman and Pryor (AR), Vitter and Landrieu (LA); House: Cotton (AR-4), Fleming (LA-4), McAllister (LA-5).

| Phase | Estimated Federal Cost of Phase | Federal Funding Thru FY 13 | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|---|---|
| Construction | $91,905,000 | $91,905,000 | $0 | $0 | $6,300,000 |

# The 8 Authorities of the Continuing Authorities Program (CAP)

**Section 14**

## Emergency Streambank & Shoreline Protection - Flood Control Act of 1946 as amended by WRDA 1996

This authority is to prevent erosion damages to highways, bridge approaches, public works, and other nonprofit public facilities by the emergency construction or repair of streambank and shoreline erosion protection. These are two-phase projects: Study cost for the first $100,000 is 100% Federal with any amount over $100,000 cost-shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 65% Federal and 35% non-Federal with a Federal funding limit of $1.5 million per project and a national program limit of $15 million.

**Section 107**

## Small Navigation Projects - River and Harbor Act of 1960

This authority provides improvement to navigation including dredging of channels, widening of turning basins, and construction of navigation aids. These are two-phase projects: Study cost for the first $100,000 is 100% Federal with any amount over $100,000 cost-shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 80% Federal and 20% non-Federal with a Federal funding limit of $7 million per project and a national program limit of $35 million.

**Section 205**

## Small Flood Control Projects - Flood Control Act of 1948 as amended by WRDA 1999

This authority for local protection from flooding by the construction or improvement of flood control works such as levees, channels, and dams. Nonstructural alternatives are also considered. These are two-phase projects: Study cost for the first $100,000 is 100% Federal with any amount over $100,000 cost-shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 65% Federal and 35% non-Federal with a Federal funding limit of $7 million per project and a national program limit of $55 million.

**Section 206**

## Aquatic Ecosystem Restoration - Water Resources Development Act of 1996, as amended by WRDA 1996

This authority provides for restoration of degraded aquatic ecosystems. A restoration project is adopted for construction only after investigation shows that the restoration will improve the environment , and/or elements and features of an estuary is in the public interest, and is cost effective. These are two-phase projects: Study cost for the first $100,000 is 100% Federal with any amount over $100,000 cost-shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 65% Federal and 35% non-Federal with a Federal funding limit of $5 million per project.

Section 1135

## Project Modification for Improvements to the Environment - Water Resources Development Act of 1986 as amended by WRDA 1996 and WRDA 1999

This authority provides for ecosystem restoration through modification to Corps structures or operation of Corps structures or implementation of restoration features when the construction of Corps projects has contributed to degradation of the quality of the environment. These are two-phase projects: Study cost for the first $100,000 is 100% Federal with any amount over $100,000 cost shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 75% Federal and 25% non-Federal with a Federal funding limit of $5 million per project and a national program limit of $40 million.

Section 208

## Snagging and Clearing for Flood Control- Flood Control Act of 1954

This authority provides improvements for flood control by removing accumulated snags and other debris, and clearing and straightening of the channels in streams in the interest of flood control. Study cost for the first $100,000 is 100% Federal with any amount over $100,000 cost-shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 65% Federal and 35% non-Federal with a $500,000 Federal limit. This Federal cost limitation includes all project-related costs for feasibility studies, planning, engineering, construction, supervision, and administration.

Section 204

## Ecosystem Restoration Projects in Connection with Dredging

**Water Resources Development Act of 1992, as amended**

This authority provides for protection, restoration, and creation of aquatic and wetland habitats in connection with construction and maintenance dredging of an authorized project. Study cost for the first $100,000 are 100% Federal with any amount over $100,000 cost shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 75% Federal and 25% non-Federal.

Section 111

## Mitigation of Shore Damages- Water Resources Development Act of 1968, as amended

This authority provides for the prevention or mitigation of erosion damages to public or privately owned shores along the coastline of the United States when these damages are a result of a Federal navigation project. This authority cannot be used for shore damages caused by river bank erosion or vessel-generated wave wash. It is not intended to restore shorelines to historic dimensions, but only to reduce erosion to the level that would have existed without the construction of a Federal navigation project. Cost sharing may not be required for this program. If the Federal cost limitation is exceeded, specific Congressional authorization is required. Study cost for first $100,000 is 100% Federal with any amount over $100,000 cost shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 65% Federal and 35% non-Federal with a Federal funding limit of $5 million per project.

# Operation and Maintenance

# Operation and Maintenance

# Operation and Maintenance (O&M)

**The Operation and Maintenance program focuses on the need to preserve the existing Civil Works Infrastructure such as locks, dams, navigation channels, recreation facilities and provide adequate levels of service.**


**Yellow Bend Port, AR**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
# Yellow Bend Port, AR

River and Harbor Act of 1960, Section 107

## Operation and Maintenance (NAV)

**Location:** Yellow Bend Port is an inland port on the Mississippi River, located in Desha County, AR.

**Description:** It was constructed in 1960 and has been maintained annually. The main channel is 1,500 feet long by 140 feet wide and the turning basin is 800 feet long by 300 feet wide. Both channels are maintained at a minimum depth of 9 feet.

**Issues**: Annual maintenance dredging of the port.

**Importance:** The port meets transportation needs for water-oriented industry in Desha and Chicot Counties, AR.

**Risk:** Without maintenance dredging funds, this port will lose project dimensions requiring the port to be shut down during the busiest time of the year when crops are harvested and shipped. If not dredged, the economic impact at the port would be $600,000 and an estimated $4,200,000 economic impact to the region. The port is currently obtaining permits to construct a rail system which would increase its annual tonnage to over 1 million tons.

**Consequence**: This port services many small communities and farmers in the Arkansas delta. The loss of navigation will have significant adverse economic impacts on the region.

Yellow Bend Port

**Activities for FY 14**: Funds are being used for maintenance dredging of the Port.

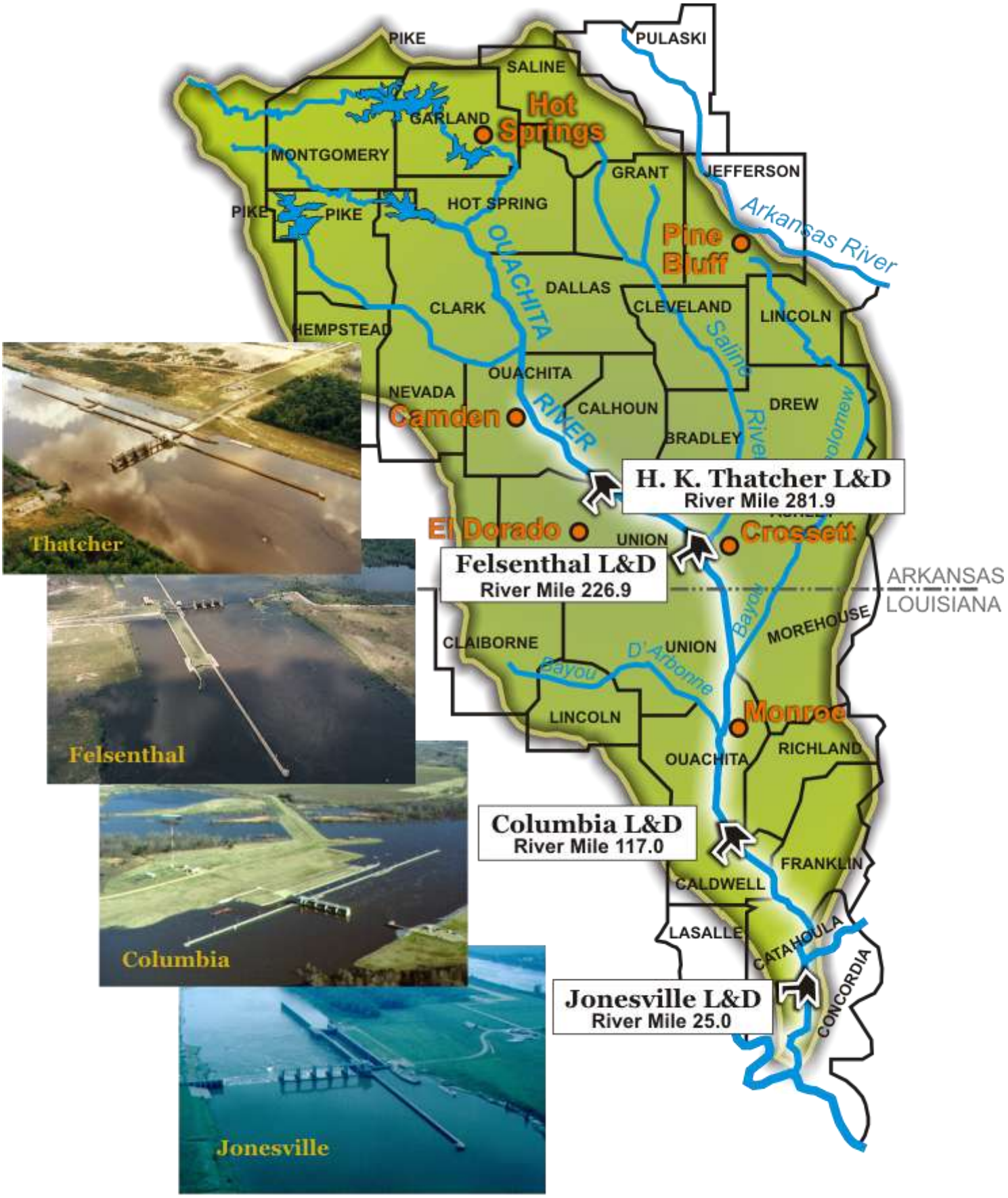
**Acquisition Strategy:** A contract will be awarded for all harbor and port dredging.

**Amount That Could Be Used in FY 15**: Budgeted funds of $3,000 will be used for surveys. Additional funds in the amount of $481,000 could be used to fund maintenance dredging.

**Project Sponsor/Customer:** Yellow Bend Port

**Congressional Interest**: Senate: Boozman and Pryor (AR); House: Cotton (AR-4).

| Phase | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|
| O&M | $115,000 | $3,000 | $484,000 |




**Ouachita-Black Navigation Project**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
# Ouachita-Black Navigation Project, AR

River and Harbor Act of 1950 as modified by River and Harbor Act of 1960

## Operation and Maintenance (NAV, FRM, REC, ENS)

**Location:** The project for navigation on the Ouachita/Black Rivers extends 366 miles from the mouth of the Black River to Camden, Arkansas.

**Description:** The project provides for a 9- by 100-foot navigation channel and also includes a diversion channel through Catahoula Lake near Jonesville, Louisiana, for ecological reasons.

**Issues**: Uncertainty of sufficient annual dredging funding has adverse economic impacts to the navigation system and the users of the waterway. Failure to maintain the authorized depth (as much as 2.0 feet) for much of the year required shippers to light load or cease commercial navigation operations.

**Importance:** Recent river trends have shown a higher need for dredging at the approaches to the locks. Without dredging the lock approaches, the locks may become inaccessible affecting 32 companies and 18 shippers. Industries use the project to transport commodities such as calcium chloride, calcium bromide, and farm products, and gasoline; commercial fishermen and the public recognize the project as an important economic resource.

**Risk:** Without dredging, the project will have less than authorized project depth for much of the year requiring shippers to light load or cease commercial navigation operations. Navigation could be closed, causing private sector workforce layoffs, along with traffic congestion and product price increases.

**Consequence**: Loss of navigation would have significant adverse economic impacts to the region. Significant private sector workforce layoffs would occur. Approximately 28,000 private sector jobs with an annual payroll of $325,000,000 are connected to the Ouachita-Black. Navigation above RM 281 would be closed in the event lock chamber repairs are required at H. K. Thatcher.

**Activities for FY 14**: Funds are being used to perform dredging, operate and maintain the locks and dams, operate the system at reduced hours in accordance with IMTS, and design, purchase and installation of a system for remote operation of tainter gates on two locks and dams (Felsenthal and Thatcher).

Ouachita/Black River

**Acquisition Strategy:** A contract for dredging will be awarded

**Amount That Could Be Used in FY 15**: Budgeted funds of $9,234,000 will be used to perform minimal dredging, operate and maintain the locks and dams, and operate the system at reduced hours in accordance with IMTS. Additional funds in the amount of $3,795,000 could be used to fully fund dredging ($2,000); Replace high water pilings at locks and dams ($325), repair concrete base on hinged crest gate ($145), realignment of access to boat ramps ($250), bank stabilization and dock replacement ($550), demo 3 comfort stations and replace with ADA compliant ($325) and replace admin building at Columbia ($200).

**Project Sponsor/Customer:** Ouachita River Valley Association

**Congressional Interest**: Senate: Boozman and Pryor (AR), Vitter and Landrieu (LA); House: Cotton (AR-4) and McAllister (LA-5).

| Phase | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|
| O&M | $11,188,000 | $9,234,000 | $13,029,000 |


**Blakely Mountain Dam and Lake Ouachita, Arkansas**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
# Blakely Mountain Dam/Lake Ouachita, AR

Flood Control Act of 1944, Section 10

## Operation and Maintenance (FRM, HYD, REC, ENS)

**Location:** Blakely Mountain Dam/Lake Ouachita is located on the Ouachita River in Garland and Montgomery Counties, Arkansas, west of Hot Springs, Arkansas.

**Description:** The project consists of earth-fill dam, power plant, and lake for hydropower generation, flood control, recreation, water supply, and natural resources management. Storage capacity is 2,768,000 acre-feet. The power plant has a generating capacity of 75,000 kilowatts. There are 22 campgrounds and recreation areas on the project. Annual public visitation to the project is approximately 4,500,000.

**Issues**: Routine operation and maintenance activities are on-going. Campground availability will be the same as FY 14.

**Importance:** Blakely Mountain Dam/Lake Ouachita is an economic engine for the local and regional area. The lake produces in excess of $17 million in direct economic benefits to the area while directly supporting over 309 jobs in the region. In FY 13, Blakely Mountain Power Plant generated 167,180 megawatt-hours of hydroelectric power and since being placed in operation, has produced gross revenues of over $140.6 million. Hydropower production, outdoor recreation opportunities, and extensive flood damage reduction enhance the direct regional benefits derived from this project.

**Risk:** The current funding amounts may have a minor impact to levels of service for visitors and may slightly delay routine maintenance. Overall, the project risks are minimal.

**Consequence**: Visitor assistance activities, enforcement of Rules and Regulations, environmental stewardship and natural resource protection activities will continue at reduced levels due to lack of adequate staff to accomplish those duties and meet program objectives. Loss of strategic support of programs and community partnerships will deteriorate positive relationships that have proven to leverage Federal dollars at a rate of 5 to 1 for project initiatives and benefit.

Blakely Mountain Dam and Lake Ouachita

**Activities for FY 14**: Funds are being used for routine operation and maintenance for the project and maintain same level of recreation service and campground availability as in FY 13. Funds will also be use for the power tunnel rehabilitation work.

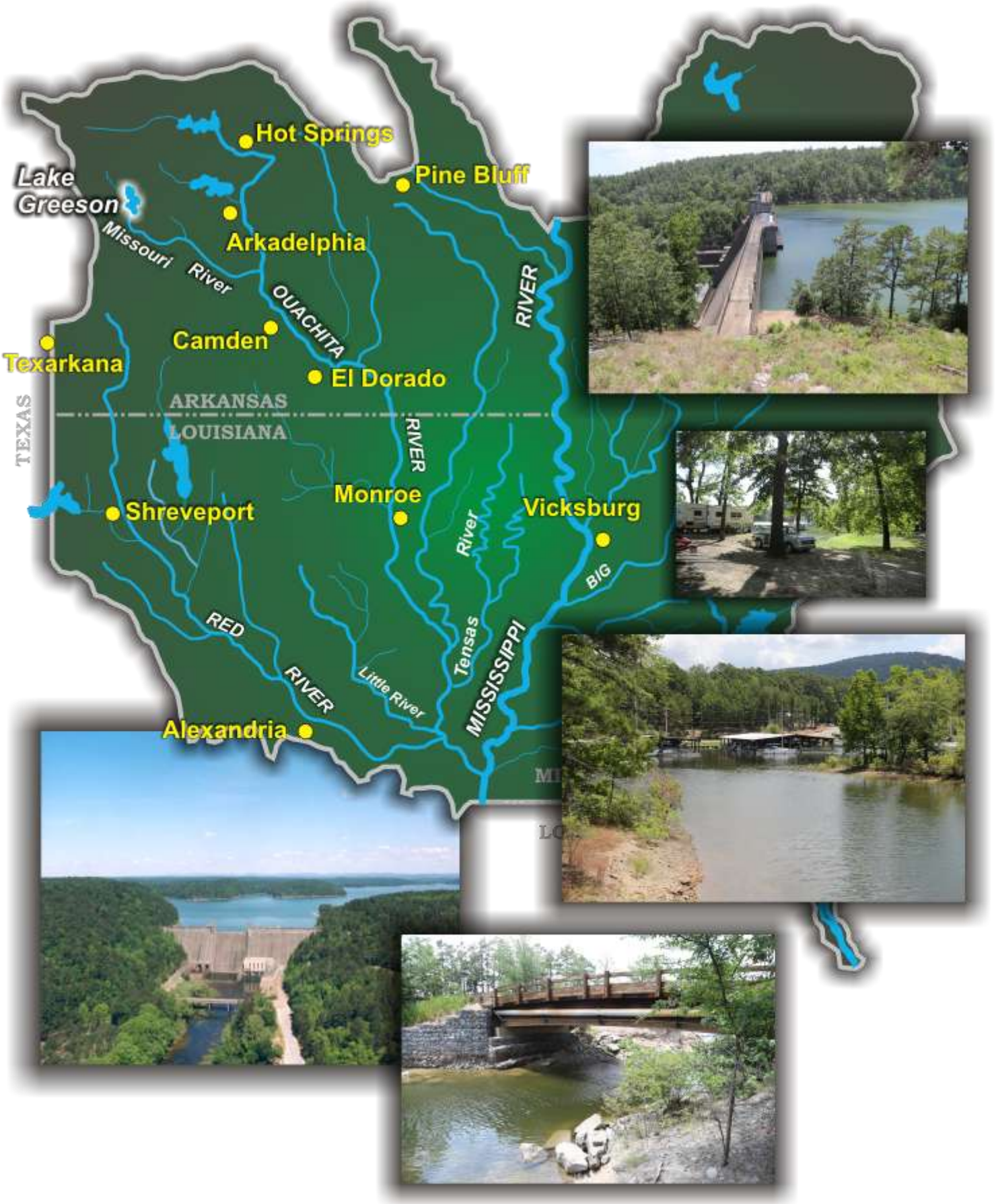
**Acquisition Strategy:** A contract is scheduled for award for the power tunnel rehabilitation in FY 14.

**Amount That Could Be Used in FY 15**: Budgeted funds of $7,558,000 will be used to continue routine operations and maintenance. Additional funds in the amount of $18,166,000 could be used to update Master Plan ($369,000), Dam maintenance ($275,000), contracting services ($35,000), campsite electrical service upgrade ($175,000) coordinate existing water supply agreements ($5,000) , inventory soil and vegetation ($75,000), replace generator lubrication oil ($75,000), install electrical campsite services ($135,000), transfer from commercial power grid to service from Blakely Hydro power ($1,600,000), and backlog maintenance ($15,422,000).

**Project Sponsor/Customer:** N/A

**Congressional Interest**: Senate: Boozman and Pryor (AR); House: Cotton (AR-4).

| Phase | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|
| O&M | $7,904,000 | $7,558,000 | $25,724,000 |




**Narrows Dam and Lake Greeson, AR**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
# Narrows Dam/Lake Greeson, AR

Flood Control Act of 1944

## Operation and Maintenance (FRM, HYD, REC, ENS)

**Location:** Narrows Dam/Lake Greeson is located on the Little Missouri River in Pike County, AR, north of Murfreesboro, AR.

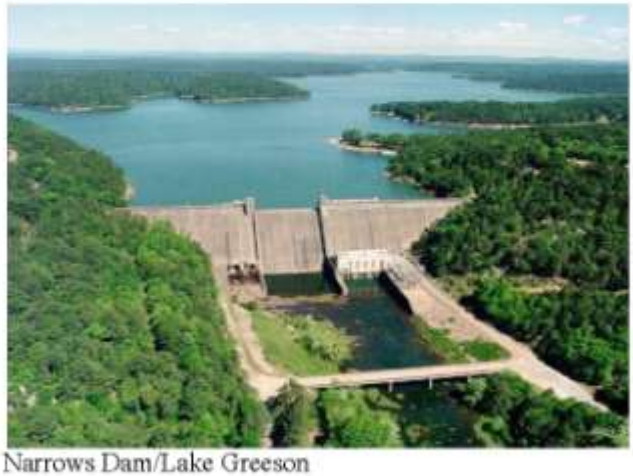
**Description:** The project consists of a concrete dam, power plant and lake for hydropower generation, flood control, recreation, water supply, and natural resources management. Storage capacity of the lake is 407,000 acre-feet. The power plant has a generating capacity of 25,500 kilowatts. There are 16 campgrounds and recreation areas on the project. Annual public visitation to the project is approximately 2,000,000.

**Issues**: Routine operation and maintenance activities are on-going. Campground availability will be the same as FY 14.

**Importance**: Narrows Dam/Lake Greeson is an economic engine for the local and regional area. The lake produces in excess of $6 million in direct economic benefits to the area while directly supporting over 114 jobs in the region. In FY13 Narrows Power Plant generated 52,280 megawatt-hours of hydroelectric power and since being place in operation, has produced gross revenues of over $43.1 million. Hydropower production, outdoor recreation opportunities and extensive flood damage reduction enhance the direct regional benefits derived from this project.

**Risk:** The current funding amounts will have a minor impact to levels of service for visitors and will slightly delay routine maintenance. Overall, the project risks are minimal.

**Consequence**: Visitor assistance activities, enforcement of Rules and Regulations, environmental stewardship and natural resource protection activities will continue at reduced levels due to lack of adequate staff to accomplish those duties and meet program objectives. Loss of strategic support of programs and community partnerships will deteriorate positive relationships that have proven to leverage Federal dollars at a rate of 5 to 1 for project initiatives and benefit.



Narrows Dam/Lake Greeson

**Activities for FY 14**: Funds are being used for routine operations and maintenance, to maintain same level of service and campground availability as in FY 13, and initial investigation and repair to dam trash rack failure.

**Acquisition Strategy:** No contracts are scheduled to be awarded in FY 14.

**Amount That Could Be Used in FY 15**: Budgeted funds of $5,639,000 will be used for routine operation and maintenance and maintain same level of service and campground availability as in FY 14. Additional funds in the amount of $3,402,000 could be used to protect and manage shorelines ($55,000), periodic inspections, ($3,000), monitor dam and related facilities ($346,000), Fee Collection Contract and minor repairs ($357,000), and backlog maintenance items ($2,641,000).

**Project Sponsor/Customer:** N/A

**Congressional Interest**: Senate: Boozman and Pryor (AR); House: Cotton (AR-4).

| Phase | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|
| O&M | $5,831,000 | $5,639,000 | $9,041,000 |


DeGray Lake, Arkansas

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
# DeGray Lake, AR

River and Harbor Act of 1950, and Water Supply Act of 1958, as amended by Federal Water Pollution Control Act of 1961

## Operation and Maintenance (FRM, HYD, REC, ENS)

**Location:** DeGray Lake is located on the Caddo River in Clark and Hot Spring Counties, AR, northwest of Arkadelphia, AR.

**Description:** The project consists of an earth-fill dam, power plant and lake for hydropower generation, flood control, recreation, water supply, and natural resources management. Storage capacity of the lake is 495,100 acre-feet. The power plant has a generating capacity of 68,000 kilowatts. There is a re-regulating pool below the main dam for water supply storage and pumped-storage power generation. Storage capacity is 495,100 acre-feet. Eighteen campgrounds and recreation areas are located on the project. Annual public visitation to the project is approximately 3,000,000.

**Issues**: Routine operation and maintenance activities are on-going. Campground availability will be the same as FY 14.

**Importance:** DeGray Lake is an economic engine for the local and regional area. The lake produces in excess of $15 million in direct economic benefits to the area while directly supporting over 262 jobs in the region. In FY 13 DeGray Power Plant generated 56,951 megawatt-hours of hydroelectric power and since being placed in operation, has produced gross revenues of over $93.6 million. Hydropower production, outdoor recreation opportunities, and extensive flood damage reduction enhance the direct regional benefits derived from this project.

**Risk:** The current funding amounts will have a minor impact to levels of service for visitors and will slightly delay routine maintenance. Overall, the project risks are minimal.

**Consequence**: Visitor assistance activities, enforcement of Rules and Regulations, environmental stewardship and natural resource protection activities will continue at reduced levels due to lack of adequate staff to accomplish those duties and meet program objectives. Loss of strategic support of programs and community partnerships will deteriorate positive relationships that have proven to leverage Federal dollars at a rate of 5 to 1 for project initiatives and benefit.

DeGray Dam and Lake

**Activities for FY 14**: Funds are being used for routine operation and maintenance of the project and maintain the same level of recreation service as in FY 13.

**Acquisition Strategy:** No contracts are scheduled to be awarded in FY 14.

**Amount That Could Be Used in FY 15**: Budgeted funds of $5,652,000 will be used for routine operation and maintenance of the project and maintain same level of recreation service and campground availability as in FY 14. Additional funds in the amount of $7,597,000 could be used for plans and specifications for intake cylinder gate ($168,000), formal periodic inspections ($96,000), coordinate and negotiate water supply agreements ($20,000), recreation management ($1,140,000), replace office building ($2,857,000), and backlog maintenance efforts ($2,699,000), road paving ($127,000), replace waste water plants ($330,000), replace shower building ($160,000).

**Project Sponsor/Customer:** N/A

**Congressional Interest**: Senate: Boozman and Pryor (AR); House: Cotton (AR-4).

| Phase | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|
| O&M | $5,629,000 | $5,652,000 | $13,249,000 |

# MR&T Investigations

# MR&T Investigations

*Mississippi River and Tributaries*

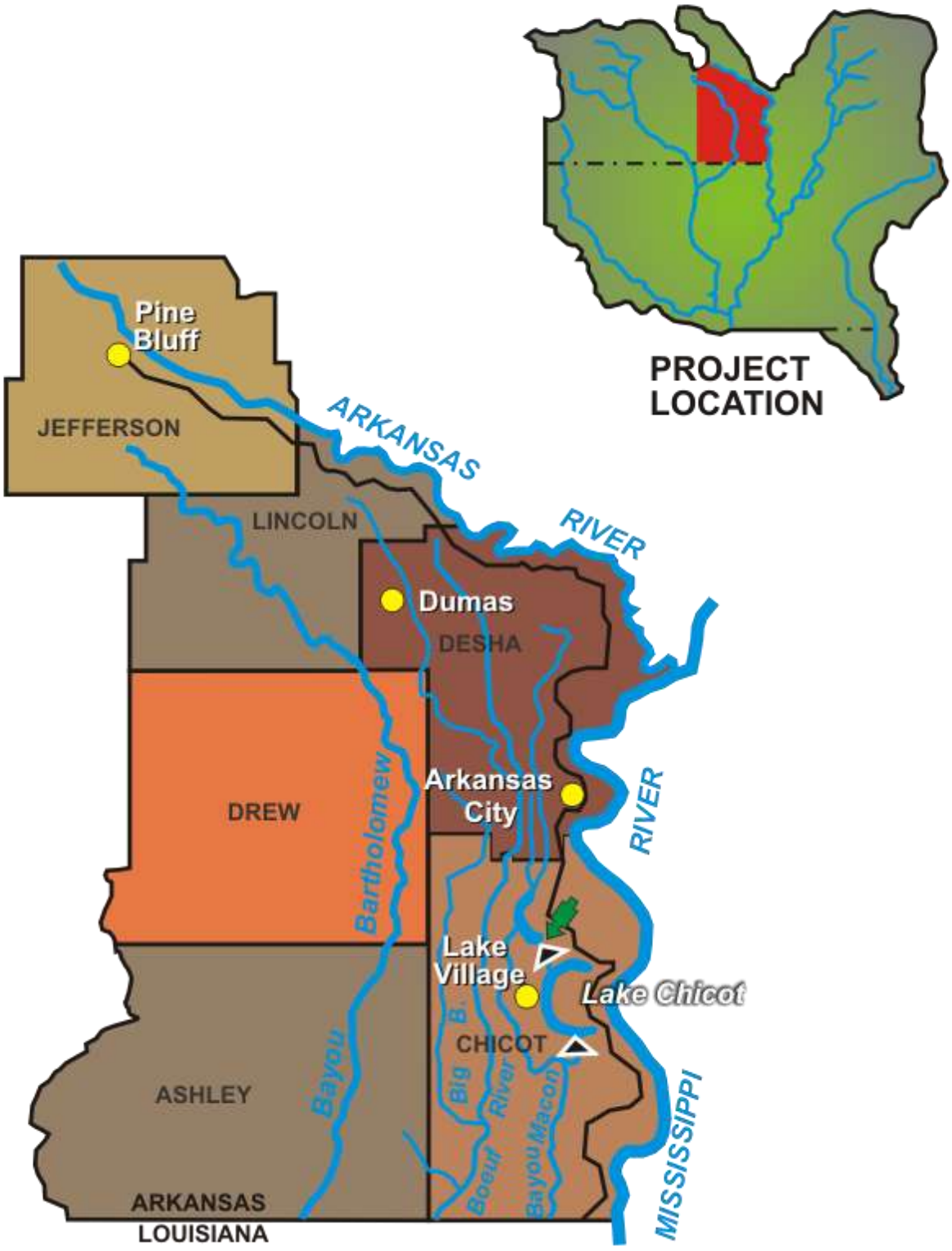
# MR&T Investigations

The major objective of the MR&T Investigations program is to study projects that provide solutions to water resource problems for the area within the MR&T authorized project, generally from the area along the Mississippi River from Cairo, IL, to the Gulf of Mexico. The Corps undertakes studies in response to directives (authorizations) from Congress. Congressional authorizations are contained in public law and in resolutions of either the House Public Works and Transportation Committee or the Senate Environment and Public Works Committee.

Most studies are conducted in two phases - reconnaissance and feasibility. The reconnaissance phase is to define the problem, opportunities, and identifying potential solutions. It also determines whether or not planning should proceed into the feasibility phase based on a preliminary appraisal of the Federal interest, cost, benefits, and environmental impacts of the identified potential solution. The phase is completed upon the signing of the Feasibility Cost-Sharing Agreement (FCSA) by the Corps and a project sponsor.

The feasibility phase can take up to 3 years to complete and is cost shared equally between the Federal Government and the non-Federal sponsor. The report results in recommendations to Congress for or against Federal participation in solutions to the water resource problem and opportunities identified in the study. A recommendation for Federal participation identifies a recommended plan/project, generally for construction authorization and funding.

The Preconstruction, Engineering and Design Studies (PED) phase of project development encompasses all planning and engineering necessary for project construction, after release of the report and Division Engineer's public notice on a favorable study. Preparation of design memorandums and plans and specifications will be cost shared in accordance with the cost sharing required for project construction.




**Southeast Arkansas, Arkansas**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
# Southeast Arkansas, AR

Resolution of the Senate Committee on Environment and Public Works adopted 23 June 1988

## Mississippi River and Tributaries, Investigations (FRM)

**Location:** The Southeast Arkansas, AR, project area includes the Boeuf-Tensas and Bayou Bartholomew Basins of southeast Arkansas. Counties included are Jefferson, Lincoln, Drew, Ashley, Chicot, and Desha.

**Description:** The study is addressing current flooding, ecosystem restoration and water supply problems and needs throughout the 1.2-million-acre watershed.

**Issues**: Flooding between November 1982 and January 1983 caused damages in excess of $47 million to approximately 1,170,000 acres of primarily agricultural lands in the Boeuf-Tensas Basin. Significant ecosystem restoration opportunities have been identified since completion of the reconnaissance report. Extensive multipurpose water use has induced ground-water reduction and salt water intrusion in the area. Flood damage reduction and ecosystem restoration are in the Federal interest and justify continuation of this important effort.

**Importance:** Prolonged periods of inundation are causing infrastructure, agricultural, and environmental damages within the study area. In addition to those damages, future agricultural water supply needs could be in jeopardy without additional water supply options and this could cause land use to convert from agriculture to non-agricultural uses.

**Risk:** There are approximately 430,000 acres of agricultural lands currently flooded by the existing 100-year flood event.

**Consequence**: Significant economic impacts would be felt with another major flood event.


**Activities for FY 14**: Sponsor has requested acceptance of Contributed Funds in the amount of $270,000 to continue the study. These funds will be used to analyze an additional alternative the Non-Federal sponsor is interested in pursuing. Once approval is received, the current FCSA will be amended to include the acceptance of contributed funds and the study will resume.

**Acquisition Strategy**: No contracts are scheduled to be awarded in FY 14.

**Amount That Could Be Used in FY 15**: No funds are requested for FY15. Project sponsor funds are being used to complete this phase.

**Project Sponsor/Customer:** Arkansas Natural Resources Commission and Boeuf-Tensas Regional Irrigation Water Distribution District

**Congressional Interest**: Senate: Boozman and Pryor (AR); House: Cotton (AR-4) and Crawford (AR-1).

| Phase | Estimated Federal Cost of Phase | Federal Funding Thru FY 13 | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|---|---|
| Feasibility | $5,153,000 | $4,936,000 | $0 | $0 | $0 |

# Mississippi River and Tributaries

## Project Area


**Collection and Study of Basic Data, Arkansas, Louisiana, and Mississippi**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
# Collection and Study of Basic Data, AR, LA, MS

Flood Control Acts of 1928, Sections 1, 2, 3, and 10

## Mississippi River and Tributaries, Investigations (FRM)

**Location:** The Collection and Study of Basic Data project is located throughout the Vicksburg District in AR, LA, and MS.

**Description:** Data collected consist of information on stream flow, sediments and nutrients, rainfall, floods, water quality, aquatic resource monitoring and other items of related hydrologic nature.

**Issues**: Data collected under this activity are for authorized flood control projects for which funds have been appropriated in the Memphis, Vicksburg, and New Orleans Districts. Data are used by numerous agencies and the public to determine when flooding will occur and to plan for any evacuations. In addition, the Environmental Protection Agency and state environmental quality agencies are now recognizing water quality as a critical element in environmental protection planning and construction. Aquatic resources are a good indication of the water quality of a particular stream. These data are vital to show projects are in conformance with state and Federal laws.

**Importance:** Data collection is essential in the planning, design, construction, and O&M of authorized flood control projects, especially significant after the Flood of 2011. The hydraulic and hydrologic data are being reviewed for how the MR&T system performed during the 2011 flood, evaluate any needed changes in the water management of the system, and identify areas/reaches in which the current 1976 Refined Project Flood Flowline may need revision.

**Risk:** Without adequate funding, the District would lose the ability to make accurate flood predictions and to determine whether the project flowline is correct to provide Project Design Flood protection to the Valley as directed by Congress. Sediment and Geomorphic Studies must continue due to changes observed during the 2011 Flood.

**Consequence**: If not funded, essential hydraulic and hydrologic and water quality data would not be collected and therefore data would not be available to accurately predict future flood and drought conditions on major rivers within the District.


**Activities for FY 14**: Funds are being used to collect essential basic data used in planning and design of authorized flood control projects. Funds are also being used for aquatic and water quality monitoring; Conduct regional review of numerous H&H, flowline, sedimentation and geomorphic related issues and/or concerns that were discovered during the 2011 flood.

**Acquisition Strategy**: No contracts are scheduled to be awarded in FY 14..

**Amount That Could Be Used in FY 15**: Budget funds of $9,280,000 will utilized to continue the Regional flowline ($4,000,000) and sedimentation and geomorphic studies ($5,000,000), and collect basic stream flow data ($280,000). Additional funds of $3,400,000 could be utilized for stream flow data ($200,000) water quality and aquatic monitoring ($1,200,000), flowline study ($1,000,000), and sedimentation and geomorphic assessments ($1,000,000).

**Project Sponsor/Customer:** Mississippi Levee Board

**Congressional Interest**: Senate: Boozman and Pryor (AR), Landrieu and Vitter (LA), Cochran and Wicker (MS); House: Crawford (AR-1), Cotton (AR-4), Scalise (LA-1), Fleming (LA-4), McAllister (LA-5), Nunnelee (MS-1), and Thompson (MS-2).

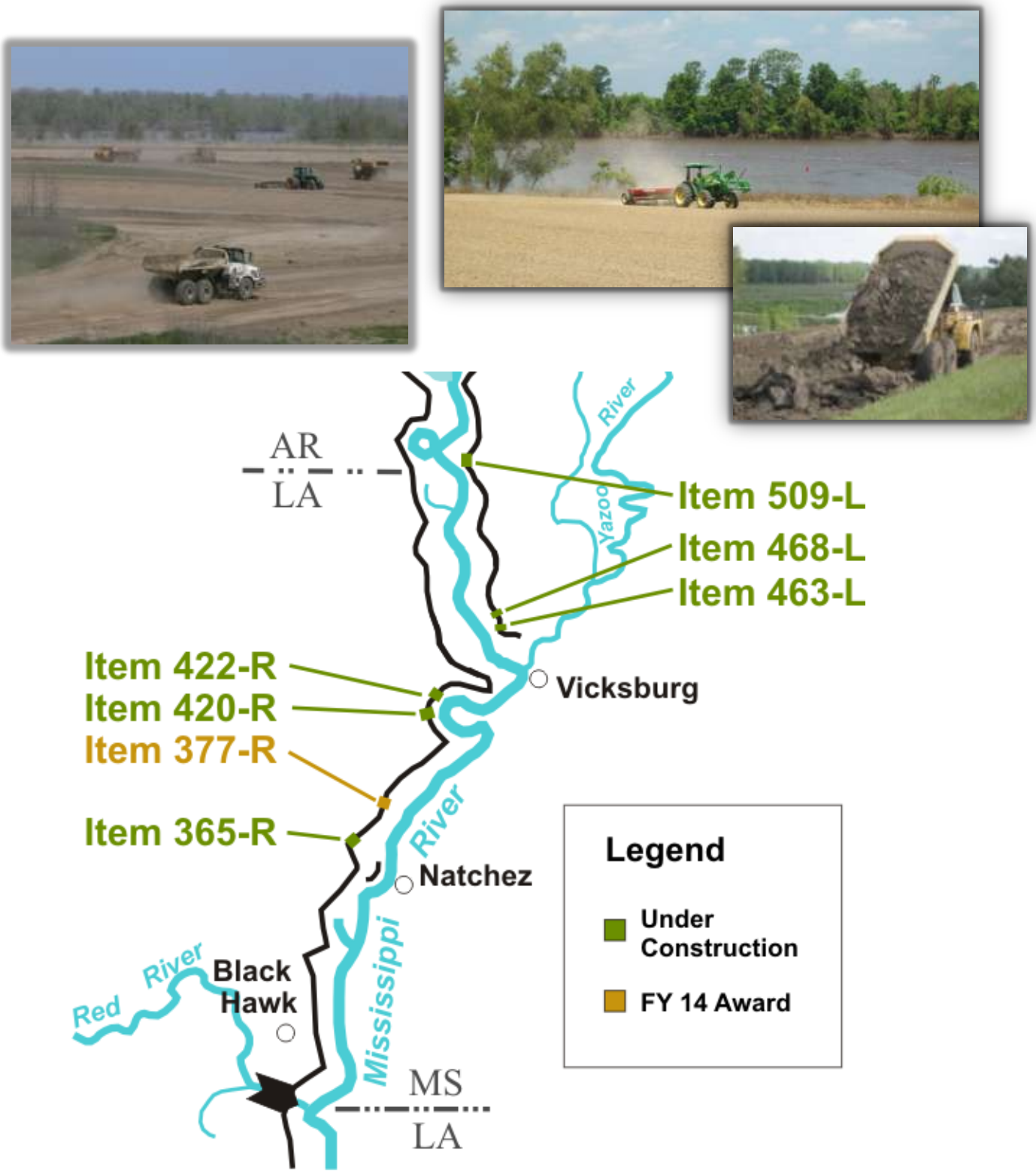
| Phase | Estimated Federal Cost of Phase | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|---|
| Feasibility | N/A | $8,370,000 | $9,280,000 | $12,680,000 |

# MR&T Construction

# MR&T Construction

# MR&T Construction

**The objective of the MR&T construction program is to construct and complete authorized and appropriated MR&T projects as economically and quickly as practicable within program constraints and consistent with current national priorities.**




**Mississippi River Levees, AR, LA, and MS**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet

## Mississippi River Levees, AR, LA & MS

Flood Control Acts of 1928, 1936, 1941, 1944, 1946, 1950, 1954, 1962, 1965, 1968, River Basin Monetary Authorization Act of 1971, WRDA 1992, Sec 103, WRDA 2000, Section 508

## Mississippi River and Tributaries, Construction (FRM)

**Location:** The Mississippi River levee system on the west bank extends from Allenville, Missouri, on the Little River Diversion Channel generally southward to Venice, Louisiana, and on the east bank from Hickman, Kentucky, to opposite Venice, Louisiana, except where interrupted by hills and tributary streams. Included in the system are the levees, which protect Mounds, Mound City and Cairo, Illinois, and the New Madrid Levee and Floodway.

**Description:** Improvement provides for raising, strengthening, and in some cases, extending existing levees to provide protection against the project design flood.

**Issues**: There are currently 110 miles remaining of deficient levees within the Vicksburg District.

**Importance:** The Mississippi River Levees are designed to protect people, property, infrastructure, and the environment in the alluvial valley against the project design flood by confining flow to the channel between the levees and natural hill lines, except where it enters natural backwater areas or is diverted purposely into floodway areas.

**Risk:** Catastrophic damage is likely to occur if the system is below authorized level of protection.

**Consequence**: A breach in the levee could result in over 1 million acres inundated, towns and cities flooded, and lives lost. Commercial impacts include roads, agricultural and timber production. Farmland is at risk of flooding, resulting in devastation of primary economic engine of the region. Environmental losses of terrestrial habitat and wildlife would be significant.

**Activities for FY 14**:
Funds are being used award Item 377R, Waterproof-Upper Lake, Concordia, LA ($7,500,000); for relocation of utilities; engineering and design of future items of construction; and to continue construction on Items 422R, Reid Bedford-King, LA; 420R, Bayou Vidal to Elk Ridge, LA; 509L, Lake Jackson-Palmetto, MS; and 463L, Magna Vista-Brunswick, MS. Item 420-R Bayou Vidal – Elkridge (Levee Enlargement and Seepage Control).

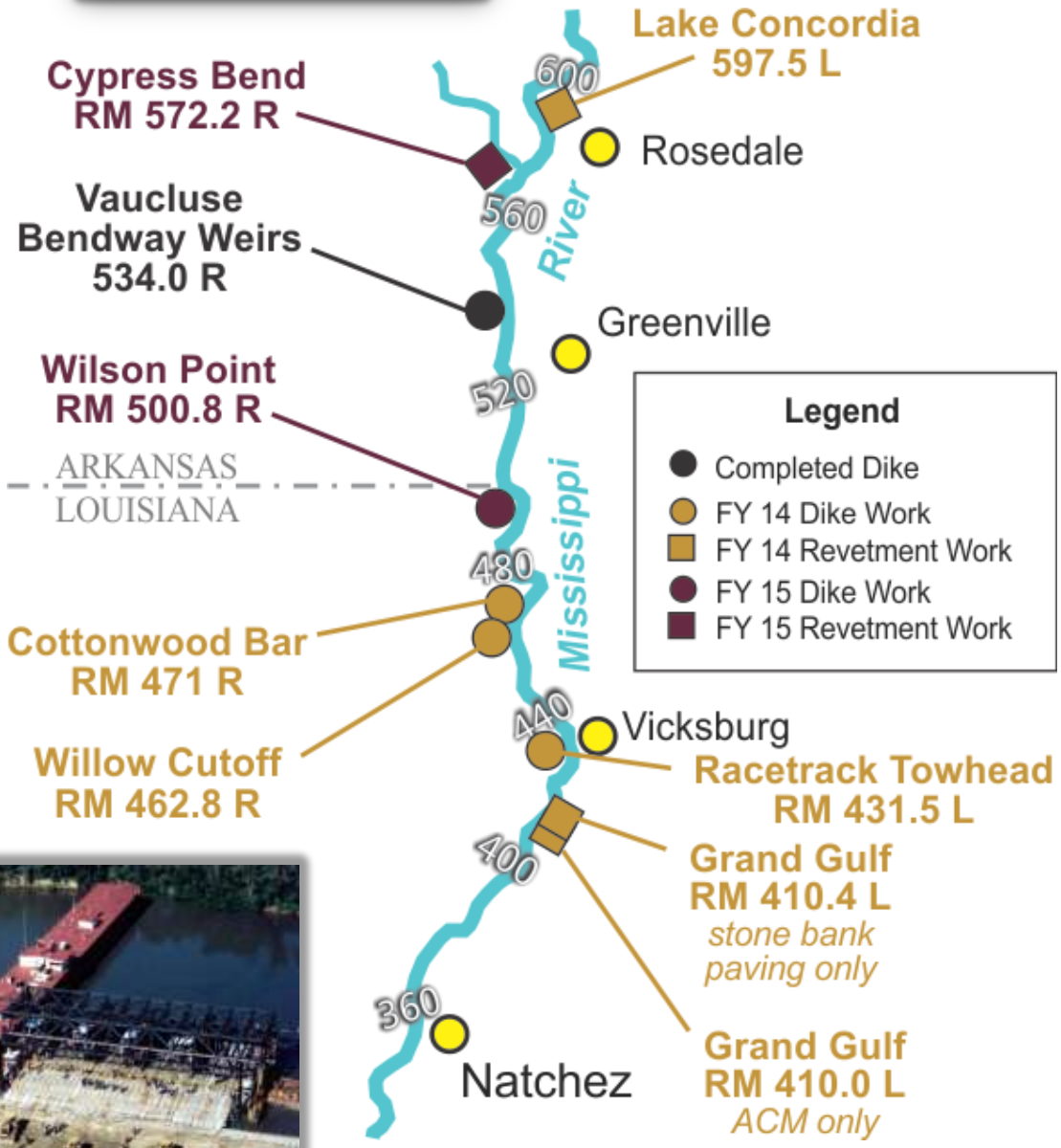
**Acquisition Strategy:** Item 377R will be awarded in 2014.

**Amount That Could Be Used in FY 15:** Budgeted funds of $12,155,000 will be used for relocation of utilities, engineering and design of future items of construction. Additional funds in the amount of $23,500,000 could be used to construct Waterproof-Upper Lake Concordia, LA, Item 374-R ($10,000.0) Magna Vista-Brunswick, MS, Item 465-L ($8,000.0), Lake Jackson to Palmetto, Item 511L ($4,000.0) and Willow Pt Youngs Pt, LA Item 457R ($1,500.0).

**Project Sponsor/Customer:** Mississippi Levee Board, Fifth Louisiana Levee Board, and Southeast Arkansas Levee District.

**Congressional Interest**: Senate: Boozman and Pryor (AR), Landrieu and Vitter (LA), Cochran and Wicker (MS); House: Crawford (AR-1), Cotton (AR-4), Scalise (LA-01), McAllister (LA-5), Thompson (MS-2).

| Phase | Estimated Federal Cost of Phase | Federal Funding Thru FY13 | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|---|---|
| Construction | $1,067,100,000 | $728,891,100 | $13,455,000 | $12,155,000 | $35,655,000 |




**Mississippi River Channel Improvement, Arkansas, Louisiana, and Mississippi**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet

## Mississippi River Channel Improvement, AR, LA, & MS

Flood Control Acts of 1928 (Section 1); 1936 (Section 1); 1938 (Section 4); 1941 (Section 3); 1944 (Section 10); 1962 (Section 203); 1965 (Section 201, 204); 1966 (Section 202, 203); and 1970 (Section 207)

## Mississippi River and Tributaries, Construction (FRM, NAV)

**Location:** The project is located in the Mississippi River and along its banks from the vicinity of Cessions Towhead at River Mile 616 AHP, to Union Point at River Mile 326 AHP, a distance of approximately 290 miles.

**Description:** The plan of improvement consists of stabilization of the Mississippi River main channel in a desirable alignment for purposes of flood control and navigation by means of revetments, river training structures (dikes, chevrons, and bendway weirs), and improvement dredging.

**Issues**: The Lower Mississippi River experienced the flood of record at many locations during 2011. Many channel improvement features including both revetments and dikes were damaged.

**Importance:** River training structures improve navigation conditions, stabilize bends, and reduce maintenance dredging requirements. Revetment construction maintains channel alignment and protects the banks from erosion.

**Risk:** Catastrophic damage to the navigation channel, river banks, and adjacent mainline levee is likely to occur if the system is not constructed as authorized.

**Consequence:** Failure to adequately fund will result in channel deterioration which would adversely impact the navigation industry in economically and efficiently transporting commodities on the Mississippi River. Continued erosion of banks and/or failure of revetments would adversely impact channel alignment and threaten the integrity of the mainline levee system.

Stone Dike Construction

Revetment Construction – Articulated Concrete Mat (ACM)

**Activities for FY 14**: Funds are being used for dike construction at Cottonwood Bar, LA, Willow Cutoff, LA, and Racetrack Towhead, MS, and for revetment construction at Lake Concordia, MS, and Grand Gulf, MS. Funds are also being used to fund stone bank paving associated with revetment construction.

**Acquisition Strategy**: Three contracts have been awarded in FY 14, Cottonwood Bar, Willow Cutoff and Racetrack Towhead dikes and Stone Bank Paving.

**Amount That Could Be Used in FY 15:** Budgeted funds of $16,600,000 will be used to fund continued design and construction management of dikes, stone bank paving, and continued design and construction of revetments. Additional funds in the amount of $14,900,000 could be used to fully fund dike construction at Wilson Point, LA ($5,400.0); Ben Lomand, MS ($6,100.0); and Anconia Chute, AR ($3,400.0).

**Project Sponsor/Customer:** Navigation industry, environmental community, and Mississippi Levee, 5th Louisiana Levee, and Southeast Arkansas Levee Boards.

**Congressional Interest**: Senate: Boozman and Pryor (AR), Landrieu and Vitter (LA), Cochran and Wicker (MS); House: Crawford (AR-1), Cotton (AR-4), McAllister (LA-5), Thompson (MS-2), and Harper (MS-3).

| Phase | Estimated Federal Cost of Phase | Federal Funding Thru FY 13 | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|---|---|
| Construction | $1,245,000,000 | $987,895,000 | $35,563,000 | $16,600,000 | 31,500,000 |

# MR&T Maintenance

# MR&T Maintenance

# MR&T Maintenance

**The MR&T Maintenance program focuses on the need to preserve the existing infrastructure and provide justified levels of service at the least cost.**


**Tensas Basin, Boeuf-Tensas River, Arkansas and Louisiana**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet

## Tensas Basin, Boeuf-Tensas River, AR and LA

Flood Control Acts of 1944, 1946, 1950, 1958, 1962, 1965, 1968, and WRDA of 1986

## Mississippi River and Tributaries, Maintenance (FRM)

**Location:** The flood control project is located in central and northeast Louisiana and southeast Arkansas and includes the Lake Chicot pumping plant.

**Description**: The project provides for channel improvement for flood control and to afford adequate outlet drainage for 5,300 square miles in southeast Arkansas and northeast Louisiana.

**Issues**: Critical work is needed to ensure the integrity of the project to protect people and property from flooding. This critical work consists of inspecting the under slab and backfill drains for siltation to ensure proper drainage of the substrate under the downstream slab of the pumping plant to prevent uplift. The tributaries in the Boeuf-Tensas Basin have aging weirs that have already failed or are in danger of failing and need replacing. Severe erosion and corrosion have been discovered on multiple pumping plant components that need repairs to prevent catastrophic pump failure.

**Importance:** The Lake Chicot Pumping Plant diverts local storm-water runoff into the Mississippi River upstream of Lake Chicot in Chicot County, AR. The proper operation of this pumping plant significantly reduces the amount of storm runoff that must be transferred by the Boeuf-Tensas River system from southeast Arkansas through Louisiana into the Ouachita-Black River system. The portion of the Boeuf-Tensas River system in southeast Arkansas is contained by a series of weirs in the various tributaries that are 50-60 years old and have reached their design and in some cases their useful life. These weirs effectively control the rate of runoff and the amount of in-channel vegetation present in the tributary channels reducing the annual maintenance costs for these channels to the local sponsors of the project.

**Risk**: Leaving the project in disrepair may lead to reduced levels of flood protection and flooding in southeast Arkansas.

**Consequence**: Failure to operate and maintain channels and weirs would jeopardize the project integrity and benefits.

Lake Chicot Pump Plant

**Activities for FY 14**: Funds are being used to continue operation and maintenance at a reduced level of service) and repair failed electrical bus to the Lake Chicot Pumping Plant..

**Acquisition Strategy:** No contracts are scheduled to be awarded in FY14

**Amount That Could Be Used in FY 15:** Budgeted funds of $2,485,000 will be used to continue operation and maintenance of project features, gather data, contract guards, perform water control analysis, inspect the bridge and hydraulic steel structure and perform work needed to ensure the integrity of the project. Additional funds in the amount of $992,000 could be used for repairs for two impeller bell housings/cones ($400,000), repair guide rails at LCPP ($442.0), and LCPP inlet channel repairs ($150.0)

**Project Sponsor/Customer:** Tensas Basin Levee District

**Congressional Interest**: Senate: Boozman, Pryor (AR); Vitter, Landrieu (LA); House: Cotton (AR-4), Alexander (LA-5).

| Phase | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|
| Maintenance | $6,039,000 | $2,485,000 | $3,477,000 |


**Mississippi River Levees, AR, LA, and MS**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet

## Mississippi River Levees, AR, LA & MS

FCA's 1928, 1936, 1938, 1941, 1944, 1946, 1950, 1954, 1962, 1965, 1968, River Basin Monetary Authorization Act of 1971, WRDA 92, WRDA 00

## Mississippi River and Tributaries, Maintenance (FRM)

**Location:** The Mississippi River Levee system on the west bank extends from Allenville, MO, southward to Venice, LA, and on the east bank from Hickman, KY, to opposite Venice, LA, except where interrupted by hills and tributary streams.

**Description:** The Mississippi River Levee System provides flood risk reduction to over 23 thousand square miles in the alluvial valley subject to flooding by the project flood. The alluvial valley is over 650 miles long and varies in width from 20 to 90 miles. Numerous railroads, highways, and airfields connecting the major transportation centers lie within the protected area as do several major transcontinental communication routes. In addition to highly developed agricultural areas, the levees afford protection to urban areas and many industries.

**Issues**: Levee slides are being repaired along the Mississippi River Levee System on the East and West banks utilizing supplemental funding. Additional slides developed as a result of heavy rainfall in December 2013 and January 2014.

**Importance:** Although levee slides are an expected occurrence in any levee system, the repair of levee slides is of prime importance in maintaining a robust levee system capable of performing its design function during all flood events up to and including the project design flood.

**Risk**: Leaving slides in disrepair may lead to levee safety issues, levee certification issues, reduced levels of flood protection, and increased risk of flood damage.

**Consequence**: Failure to operate and maintain the levees appropriately jeopardizes project integrity, and places the safety of the public at increased risk.

(Typical MRL Levee Slide)

**Activities for FY 14**: Funds are being used to perform routine operation and maintenance activities, repair levee slides, and resurface levees.

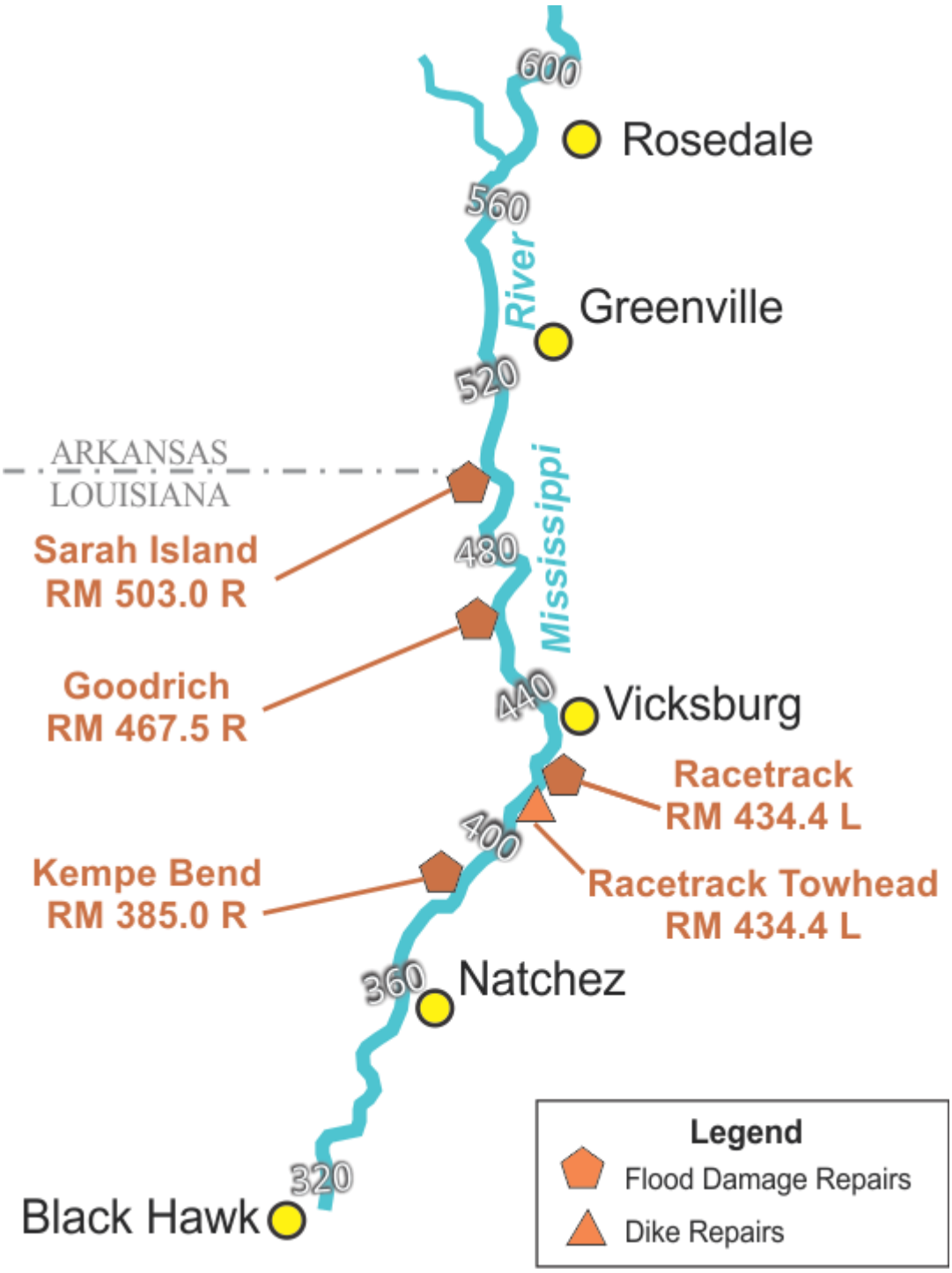
**Acquisition Strategy:** No contracts are scheduled to be awarded in FY14.

**Amount That Could Be Used in FY 15:** Budgeted funds of $2,331,000 will be used to perform routine operation and maintenance activities. Additional funds in the amount of $1,300,000 could be used to fund levee slide repairs that threaten the integrity of the levees threaten life and safety ($1,200) and operation and maintenance of mitigation areas ($100).

**Project Sponsor/Customer:** 5th LA Levee District, Southeast Arkansas Levee District, & the Board of Mississippi Levee Commissioners

**Congressional Interest**: Senate: Boozman and Pryor (AR), Landrieu and Vitter (LA), Cochran and Wicker (MS), House: Crawford (AR-1), Cotton (AR-4); Scalise (LA-1), Fleming (LA-4), McAllister (LA-5), Nunnelee (MS-1), Thompson (MS-2).

| Phase | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|
| Maintenance | $3,192,000 | $2,331,000 | $3,631,000 |




**Mississippi River Channel Improvement Maintenance**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
# Mississippi River Channel Improvement, AR, LA, & MS

FCA 1928, Sec 1; 1936, Sec 1; 1938, Sec 4; 1941, Sec 3; 1944, Sec 10; 1962, Sec 203; 1965, Sec 201, 204; 1966, Sec 202, 203; and 1970, Sec 207

## Mississippi River and Tributaries, Maintenance (FRM)

**Location:** The project is located in the Mississippi River and along its banks from the vicinity of Cessions Towhead at River Mile 616 AHP to Union Point at River Mile 326 AHP, a distance of approximately 290 miles.

**Description:** The plan of improvement consists of stabilization of the Mississippi River main channel banks by way of revetments to prevent erosion that would threaten the integrity of the mainline levees.

**Issues**: The Lower Mississippi River experienced the flood of record at many locations during 2011. As a result of this flood, many channel improvement revetments and dikes were damaged.

**Importance:** Revetment construction maintains channel alignment and protects the banks from erosion.

**Risk:** Catastrophic damage to the river banks and adjacent mainline levee is likely to occur if the system is not maintained as constructed.

**Consequence:** Failure to adequately fund will result in channel deterioration and continued erosion of banks and/or failure of revetments which would adversely impact channel alignment and threaten the integrity of the mainline levee system.

Revetment – Articulated Concrete Mat

**Activities for FY 14**: Funds are being used to complete flood damage repairs at 4 priority revetment sites- Sarah Island, LA RM 503.0R, Goodrich, LA – RM 467.5R, Racetrack, MS – RM 434.4L, Kempe Bend, LA – RM 385.0R, dike repairs at Racetrack Towhead – RM 431.5R and a stone repairs contract for both revetments and dikes.

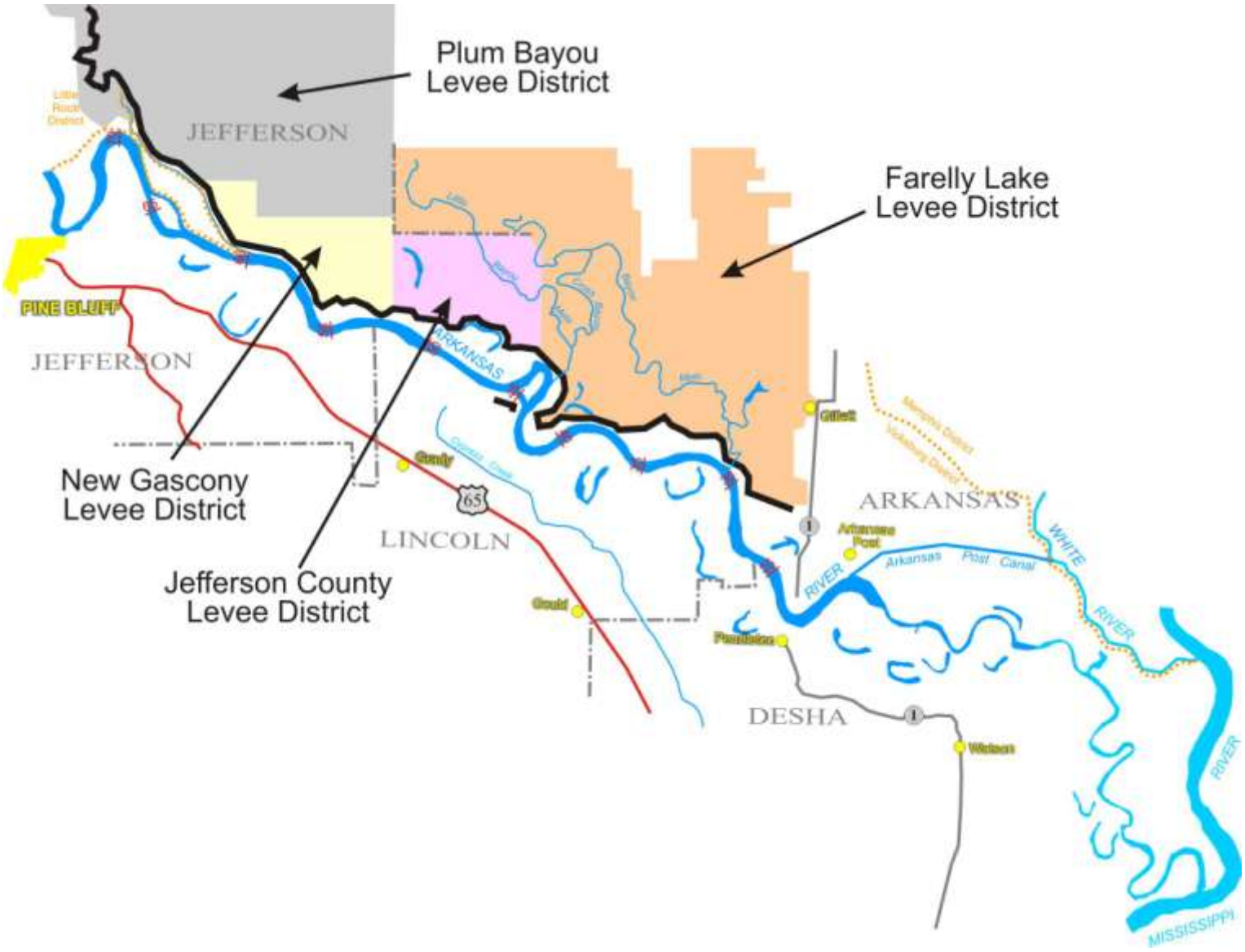
**Acquisition Strategy:** A contract for stone bank repairs will be awarded in FY 14.

**Amount That Could Be Used in FY 15:** Budgeted funds of $15,052,000 will be used to perform routine maintenance on existing revetments. Additional funds of $18,000,000 could be used to fully fund stone repairs to existing dikes damaged during the 2011 flood ($12,000.0) and maintain revetments to provide for channel alignment with stone repairs to revetments and dikes ($6,000.0).

**Project Sponsor/Customer:** Mississippi Levee Board, 5th Louisiana Levee Board, and Southeast Arkansas Levee Board

**Congressional Interest**: Senate: Boozman and Pryor (AR), Landrieu and Vitter (LA), Cochran and Wicker (MS), House: Crawford (AR-1), Cotton (AR-4), Scalise (LA-01), McAllister (LA-5), Fleming (LA-04), Nunnelee (MS-01), Thompson (MS-2), and Harper (MS-3).

| Phase | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|
| Maintenance | $14,052,000 | $15,052,000 | $33,052,000 |




**Lower Arkansas River,**
**North Bank, Arkansas**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
## Lower Arkansas River, North Bank, AR
Flood Control Acts of 1928, 1936, 1946, and 1965

## Mississippi River and Tributaries, Maintenance (FRM)

**Location:** The flood control project is located in southeast Arkansas.

**Description**: The lower Arkansas River levees prevent overflow of the alluvial valleys of the Arkansas River below the Pine Bluff, Arkansas. The north bank levee in conjunction with the west bank Mississippi River levee protects the Tensas Basin against flooding.

**Issues**: Critical work is needed to ensure the integrity of the levee system to protect people and property from flooding. This work consists of repairing levee slides and placing additional granular material on the levees to provide all weather access to the levees for flood fighting and inspection.

**Importance:** The lower Arkansas River levees prevent overflow of the alluvial valleys of the Arkansas River below Pine Bluff, Arkansas. Levees along the north bank, extending from Tucker in the vicinity of Pine Bluff to the vicinity of Gillett, protect approximately 720 square miles. The south bank levee in conjunction with the west bank MRL protects the Tensas Basin against the project flood.

**Risk**: Leaving slides in disrepair may lead to levee safety issues, levee certification issues and reduced levels of flood protection and higher risks.

**Consequence**: Failure to operate and maintain would jeopardize the project integrity and cause potential levee failure and flooding as in 2011.


Lower Arkansas River, North Bank Levee

**Activities for FY 14**: Funds are being used for routine maintenance and levee repair of project features.

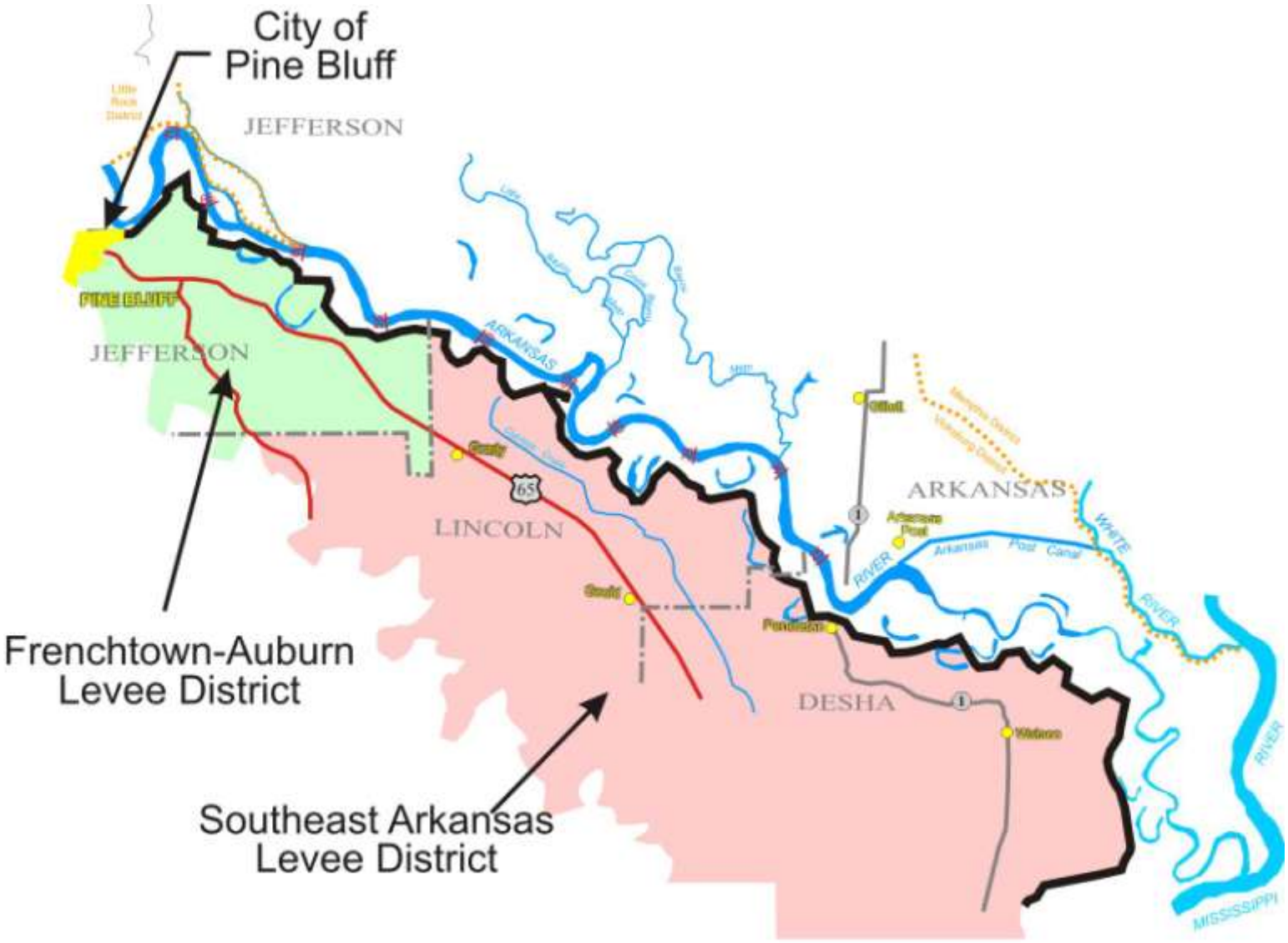
**Acquisition Strategy:** No contracts are scheduled to be awarded in FY 14.

**Amount That Could Be Used in FY 15:** Budgeted funds of $294,000 will be used for routine maintenance and levee repair. An additional funds in the amount of $300,000 could be used to repair levee slides and for levee stone surfacing.

**Project Sponsor/Customer:** N/A

**Congressional Interest**: Senate: Boozman, Pryor (AR); House: Cotton (AR-4).

| Phase | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|
| Maintenance | $287,000 | $294,000 | $594,000 |




**Lower Arkansas River,**
**South Bank, Arkansas**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
## Lower Arkansas River, South Bank, AR
Flood Control Acts of 1928, 1936, 1946, and 1965

## Mississippi River and Tributaries, Maintenance (FRM)

**Location:** The flood control project is located in southeast Arkansas.

**Description**: The lower Arkansas River levees prevent overflow of the alluvial valleys of the Arkansas River below the Pine Bluff, Arkansas. The north bank levee in conjunction with the west bank Mississippi River levee protects the Tensas Basin against flooding.

**Issues**: Critical work is needed to ensure the integrity of the levee system to protect people and property from flooding. This work consists of repairing levee slides and placing additional granular material on the levees to provide all weather access to the levees for flood fighting and inspection.

**Importance:** The lower Arkansas River levees prevent overflow of the alluvial valleys of the Arkansas River below Pine Bluff, Arkansas. Levees along the north bank, extending from Tucker in the vicinity of Pine Bluff to the vicinity of Gillett, protect approximately 720 square miles. The south bank levee in conjunction with the west bank MRL protects the Tensas Basin against the project flood.

**Risk**: Leaving slides in disrepair may lead to levee safety issues, levee certification issues and reduced levels of flood protection and higher risks.

**Consequence**: Failure to operate and maintain would jeopardize the project integrity and cause potential levee failure and flooding as in 2011.


Lower Arkansas River, South Bank Levee

**Activities for FY 14**: Funds are being used to continue operation and maintenance of project features.

**Acquisition Strategy:** No contracts are scheduled to be awarded in FY 14.

**Amount That Could Be Used in FY 15:** Budgeted funds of $198,000 will be used for routine operation and maintenance to protect the integrity of the levee system. Additional funds in the amount of $300,000 could be used for critical repair to levee slides and place stone surfacing on levees ($300,000).

**Project Sponsor/Customer:** N/A

**Congressional Interest**: Senate: Boozman and Pryor (AR); House: Cotton (AR-4).

| Phase | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|
| Maintenance | $193,000 | $198,000 | $498,000 |




**Red River Levee Districts in Arkansas**


**Mississippi River Levee Districts In Mississippi**


**Mississippi River and Ouachita River Levee Districts In Louisiana**


**Red River Levee District in Louisiana**

US Army Corps of Engineers
Vicksburg District

# Project Fact Sheet
## Negative Levee Evaluations
Water Resources Development Act 2007

**Mississippi River and Tributaries, Maintenance (FRM)**

**Location:** Throughout the Vicksburg District.

**Description:** The U.S. Army Corps of Engineers flood damage reduction mission began with the 1928 Flood Control Act, which authorized the Corps to have a significant role in flood activities nationwide, to include the protection of life and property behind Federal levee systems. Prior to the devastation in 2005 from Hurricanes Katrina and Rita, levee safety had become an issue with the Federal Emergency Management Agency (FEMA), but these events heightened the awareness. The findings of subsequent investigations into the flood damage reduction system's performance in New Orleans clearly point to the need for a comprehensive and risk-informed approach to national levee safety, including periodic assessments. This led to the development of a national levee safety program authorized through legislation within WRDA 2007.

**Issues:** Inability to achieve positive evaluation criteria for numerous MR&T levees, which have received negative evaluation reports.: Ouachita River, East Bank Levee, LA; Larto Lake to Jonesville Area Levee, LA; Red River Backwater Levee, LA; Yazoo Backwater Levee, MS; Yazoo LB Central Levee, MS; Big Sand, Yalobusha, Teoc Creek Levee, MS; Pelucia Creek South Levee, MS; Teoc Creek North Levee, MS; and Greenwood, MS, East and West Bank levee systems. We are still evaluating other MR&T levees which also could be decertified. Estimated comprehensive cost to identify issues and remediate the de-accredited systems is $10.55 million.

**Importance:** The decertification of the levees indicates the levees are not capable of containing the 1% flood event with the required freeboard or structure within the levee are inadequate. Even though the EC is a flood insurance standard for FEMA, it also indicates the levees may not be capable of withstanding a flood of greater magnitude. The levees play an important role in flood damage reduction to avoid loss of life and property damage the safety.

**Risk**: Not addressing the issues that caused the levees to be decertified may lead to levee safety issues and reduced levels of flood protection and higher risks to individual and property.

**Consequence**: Failure to address the issues with the levees would jeopardize the projects' integrity and cause potential levee failure and flooding. Additionally, until the issues with the decertified levee are addressed, FEMA will map the areas behind the levees in a flood zone requiring flood insurance.


**Activities and Current Status for FY 14**: None.

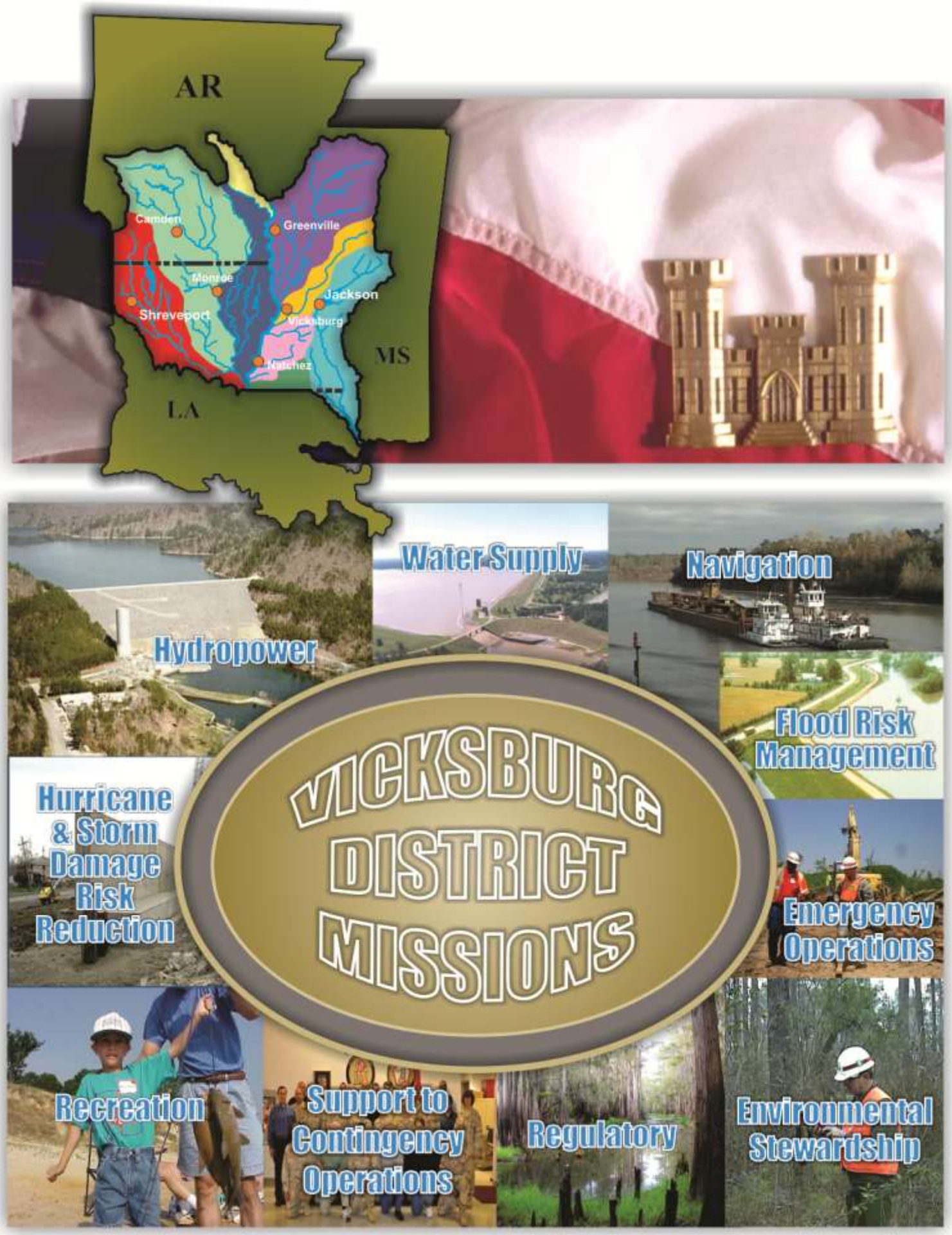
**Acquisition Strategy:** No contracts are scheduled to be awarded in FY 14.

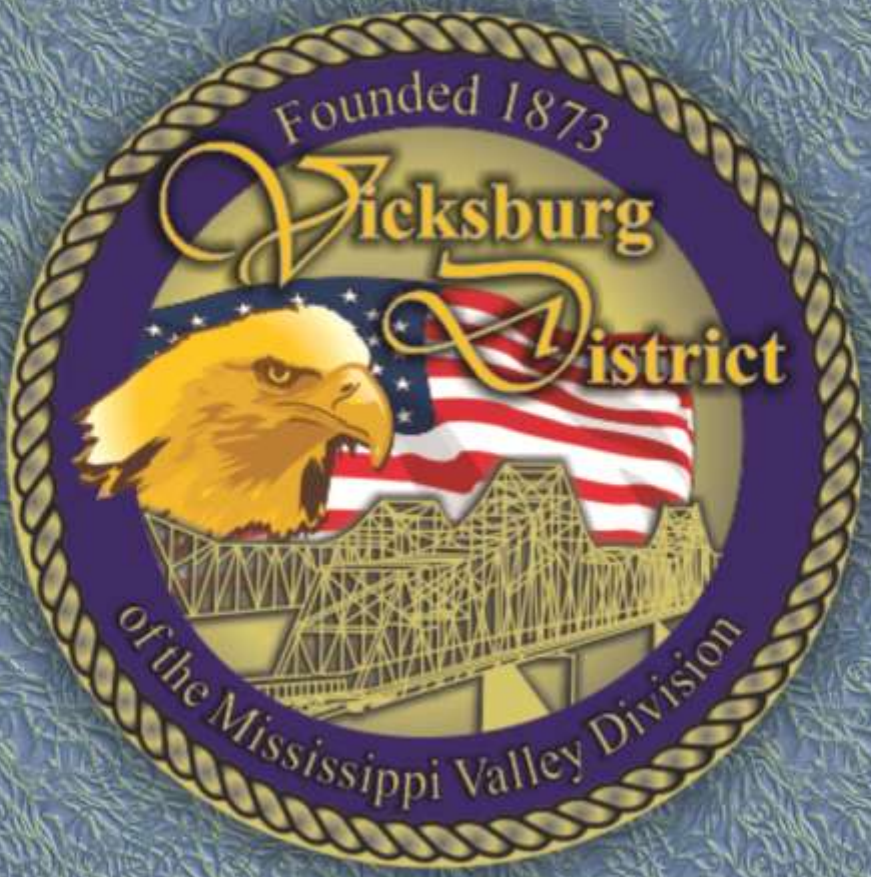
**Amount That Could Be Used in FY 15:** Funds could be used determine specific issues with levees that received negative evaluations and secondly to address and remediate the problems.

**Project Sponsor/Customer:** Fifth Louisiana Levee District, Tensas Basin Levee District, Mississippi Board of Levee Commissioners, and Yazoo-Mississippi Delta Levee Board.

**Congressional Interest**: Senate: Landrieu and Vitter (LA); Cochran and Wicker (MS); House: Scalise (LA-1), Fleming (LA-4), McAllister (LA-5), Nunnelee (MS-1), Thompson (MS-2).

| Phase | FY 14 Allocation | FY 15 Budget | FY 15 Total Capability |
|---|---|---|---|
| Maintenance | $0 | $0 | $2,200,000 |


AR
Camden
Greenville
Monroe
Jackson
Shreveport
Vicksburg
MS
Natchez
LA
Water Supply
Navigation
Hydropower
Flood Risk Management
Hurricane & Storm Damage Risk Reduction
VICKSBURG DISTRICT MISSIONS
Emergency Operations
Recreation
Support to Contingency Operations
Regulatory
Environmental Stewardship


Founded 1873
Vicksburg District
of the Mississippi Valley Division


US ARMY CORPS OF ENGINEERS
VICKSBURG DISTRICT
1873
ARKANSAS ★ LOUISIANA
★ MISSISSIPPI ★